OCTOBER 24, 1942

Railway Age

Founded in 1856

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Velvety STARTS and STOPS

for

Smooth Operation

Protect

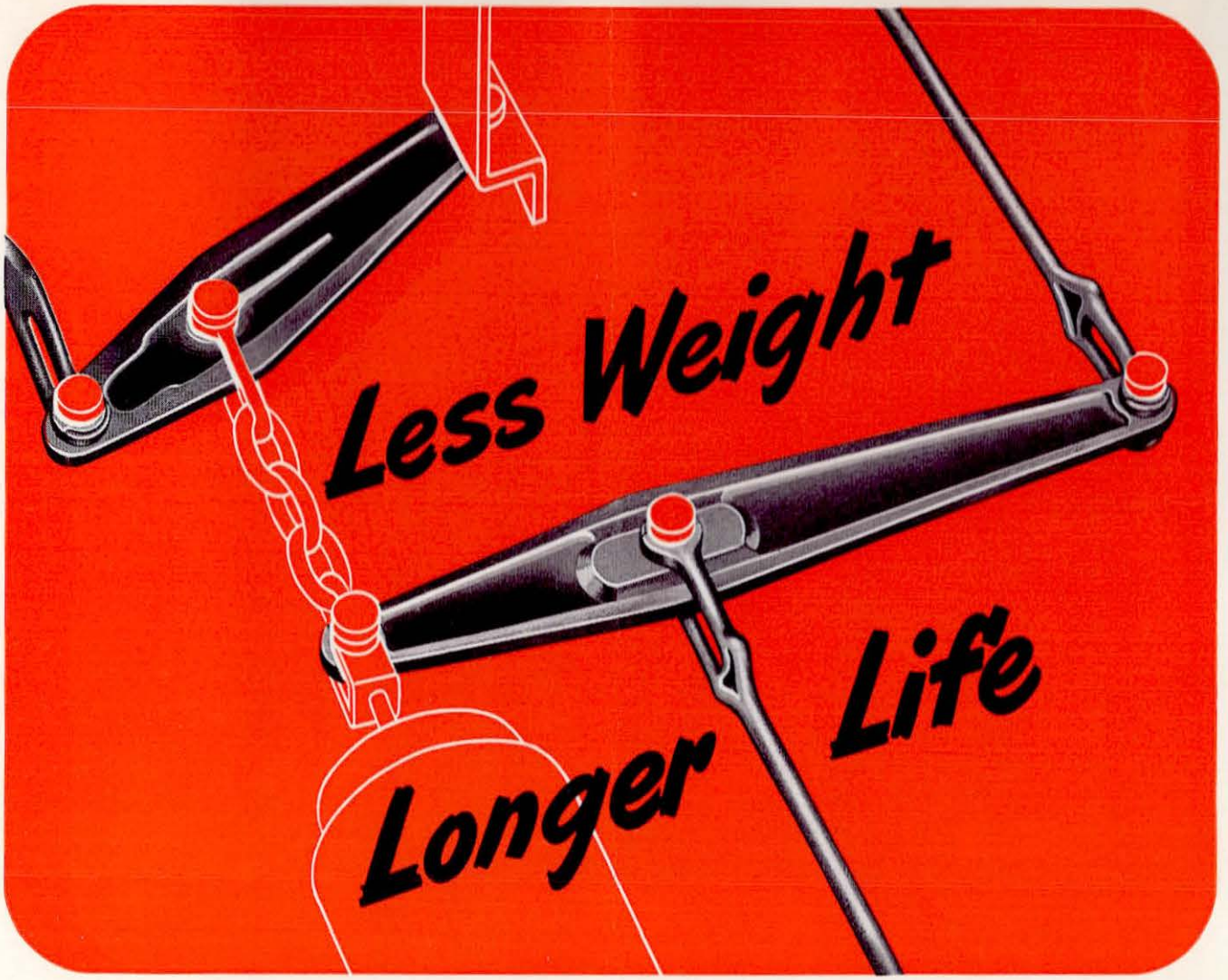
CARS and LADING

GENERAL MOTORS Diesel Road Locomotives, because of their even weight distribution and uniformly applied power, reduce wear and tear on track and bridge structures to permit their operation, without expensive replacements, in territories and at speeds not allowable with heavy steam power. GM Diesels also provide greater tonnage-hauling capacity, faster schedules, reduction in train miles as much as 50 per cent, and release for other important services as many as five heavy steam locomotives for each Diesel operated. *Transportation* is vital to *Victory* and

VICTORY IS OUR BUSINESS

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION — LA GRANGE, ILLINOIS, U.S.A.



Schaefer Forged Steel Foundation Brake Gear Appliances are doubly important parts in America's war effort. Less steel is used to accomplish the same result — and with longer life.

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING • PITTSBURGH, PA.

LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS ... TRUCK, CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS ... BRAKE ROD JAWS ... WEAR PLATES ... BRAKE SHOE KEYS

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 113, No. 17.

Answers to Some
QUESTIONS ABOUT SCRAP

Q. Why is scrap used to make steel?

A. It conserves natural ore resources, lightens the burden upon the nation's transportation system, and requires less time to convert into molten metal because scrap used by steel mills has previously been refined into steel.

Q. How is scrap used to make steel?

A. It is charged into open hearth furnaces with pig iron and small quantities of special ores and limestone.

Q. Does scrap make good steel?

A. Yes, the finest steel is made from scrap. Electric furnaces, which produce the highest grades of steel including some alloy steels, operate almost entirely upon scrap.

Q. What kind of scrap is needed by the mills?

A. Any iron and steel scrap is usable, except tin-coated or non-ferrous metals which cannot be used to make steel.

Q. How much scrap do steel mills require in a year?

A. In 1941 the total was 45,600,000 tons. Of this amount about half was steel mill scrap and the remainder came from outside sources.

Q. What are the causes of the scrap shortage?

A. Over 20,000,000 tons of scrap were shipped out of this country during the 30's, and never before in the history of the steel industry has there been such a prolonged period of high steel production. All existing accumulations of scrap have been taken and now it is the remote farm, industrial, and household scrap that must be sent to steel mills.

Q. Why not use ore to replace scrap?

A. Ore mining operations, transportation facilities, ore storage space at mills, and blast furnace capacity are based on the use of scrap and cannot be expanded immediately.

Q. Are steel mills doing anything to help the scrap situation?

A. Yes. They are spending millions of dollars to publicize the seriousness of the scrap shortage. They are building new blast furnaces and ore handling facilities. Inland is building one new 1200-ton blast furnace at its own plant and two more for the Government.

Q. Are the scrap dealers doing their part?

A. Scrap dealers did a marvelous job during 1941. In the first six months of 1942, more scrap was moved by the dealers than ever before in history. The need now is for the general public and general business to move their scrap to scrap yards, where it can be properly prepared and rapidly moved to consuming centers.

Q. Why have mills not accumulated scrap?

A. When war came, mills had normal scrap supplies. But, tremendous demand for steel and small scrap offerings quickly lowered mill scrap stocks.

Q. How much scrap do mills have on hand?

A. The supply averages less than two weeks. Many mills are operating on less than two days' supply, which is virtually on the basis of daily receipts.

Q. What would happen if no more scrap reached mills?

A. Within a few days steel output would drop at least 25%—a calamity in view of the desperate need for steel to carry on the war effort.

Q. Why should scrap be gathered now for use next winter?

A. Cold weather, snow and blizzards reduce collection, preparation and transportation of scrap. Mills normally store extra scrap for use in winter. This year—a critical year—mills cannot accumulate scrap for the winter months because it is not available to them.

Q. How can the scrap shortage be solved?

A. By the segregation and return to mills of all production scrap; by executive authority to scrap old buildings, unneeded equipment, obsolete machinery, dormant and excessive stores, unused dies, tools, fixtures, etc.

Q. How can you help?

A. If you are an executive, use your initiative and authority to designate what can be scrapped. If you are an engineer, metallurgist, superintendent, foreman, storekeeper, master-mechanic, millwright, or workman, call to the attention of your management anything and everything that you believe can be spared and sent to the mills as scrap.

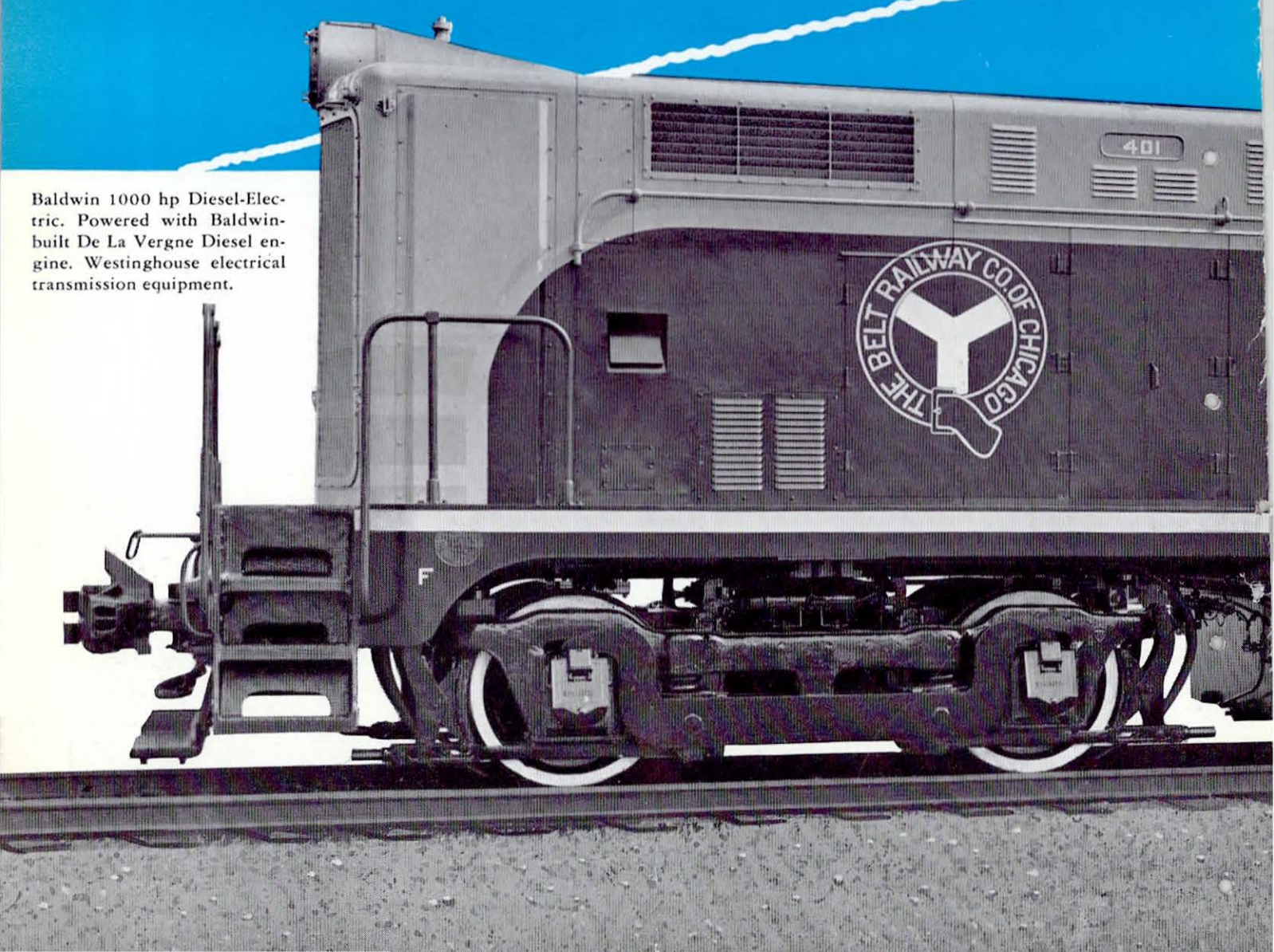
Steel mills must have more scrap so that our fighting men will have the equipment they deserve and need!

Dedicated to Victory

INLAND STEEL CO.

38 S. Dearborn Street, Chicago • Sales Offices: Milwaukee, Detroit, St. Paul, St. Louis, Kansas City

Speeding America's War Effort with



Baldwin 1000 hp Diesel-Electric. Powered with Baldwin-built De La Vergne Diesel engine. Westinghouse electrical transmission equipment.

BALDWIN

Diesel · Electrics

Today, when America is depending more than ever upon its railroads to move men, raw materials and finished war products, there must be no delay in freight yards and terminals.

Baldwin Diesel-Electric switching locomotives are furnishing the answer to this problem in many railroad yards from coast to coast.

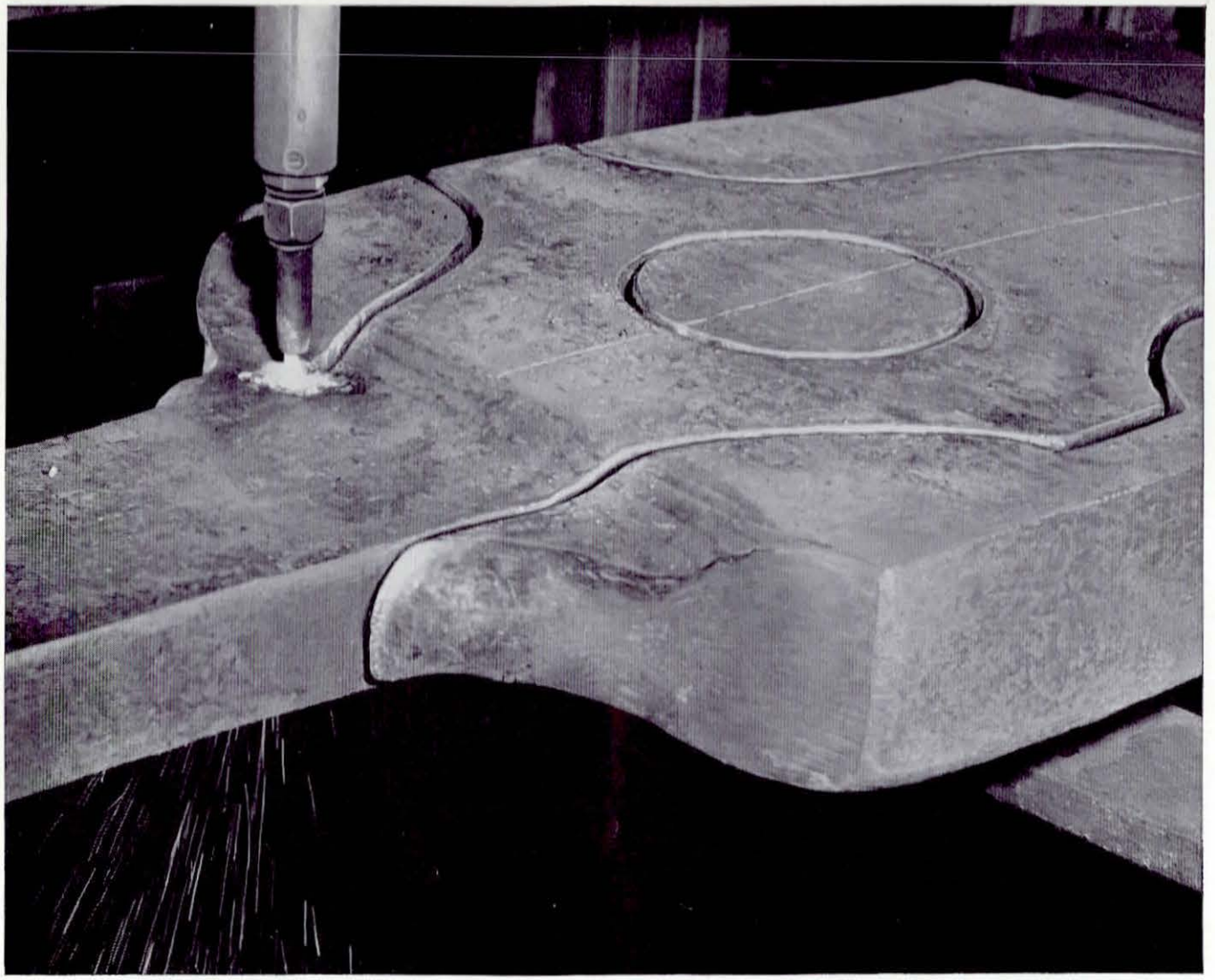
Baldwin Diesel-Electrics are engineered and built by specialists in the field of railway motive power, backed by 111 years of locomotive-building experience. These rugged locomotives have many advantages over steam switchers. They start faster and move away under smooth, even power. They operate with maximum availability. They consume less fuel, thus releasing badly needed cars for other service.

Baldwin diesel and steam locomotives are helping the railroads to haul the greatest tonnage in history. Baldwin tanks, guns and other implements of war are flowing, in ever increasing volume, to our Army and Navy.

Baldwin Serves the Nation Which the Railroads Helped to Build

BLW THE BALDWIN GROUP

THE
BALDWIN
LOCOMOTIVE WORKS
Philadelphia



OXY-ACETYLENE SHAPE-CUTTING

Speeds Locomotive Repairs

● Oxy-acetylene shape-cutting with Oxweld equipment speeds rebuilding and repairs of locomotives because this method makes possible the rapid fabrication of parts as needed from available forged steel or steel plate. One-of-a-kind production is as simple as quantity production when oxy-acetylene shape-cutting is used. Change-overs from production of parts of one shape to those of another require only a few minutes, because all that is needed is to substitute one templet for another.

Oxy-acetylene shape-cutting helps to avoid bottlenecks in machining operations, because the flame-cut edges are clean and smooth and in a great many cases parts are put in use without further finishing or machining.

THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York

SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

The word "Oxweld" is a registered trade-mark of a Unit of Union Carbide and Carbon Corporation.

HIGH-IRON THROUGH IRAN

On a desert in Southern Iran (formerly Persia) so hot that 100 degrees is considered temperate, railroad men from Altoona, Chicago, St. Louis, and Schenectady are hustling around new workshops where American-made locomotives and rolling stock are being shaped up for service on the Trans-Iranian Railway.

Rubbing shoulders with these grimy Yankees are bearded Sikhs, blond Russians, British railroaders from Crewe and Swindon, dark-skinned Armenian and Persian mechanics and drivers. They mingle and mill in a Hollywood boom town half way around the world from our picture capital. Their business is to move desperately needed defense material through Iran into Russia.

The Russian railroad from Arctic Murmansk is one of the life lines for Northern Russia. But the Trans-Iranian Railway has become the more important life line for Southern Russia. Hence, American railroaders, after doing magnificent jobs in their own country, have been sent to Iran. They are working alongside British railroaders, helping to keep the line open and active.

After the Shah of Persia had spent $160,000,000 of his subjects' money on his Trans-Iranian—in 1938—he proudly boasted that it ran "from nowhere to nowhere" across his desolate but oil-bearing country from the Persian Gulf almost to the inland Caspian Sea. As he wanted no help from Soviet Russia or Britain, his north-and-south railway was built to block Russian or British economic penetration.

When British and Russians deposed the Persian tyrant—in 1940—the Trans-Iranian had only two locomotives, rails that were falling apart, and almost no sidings for two-way traffic on 960 miles of "isolationist" tracks. A small group of British engineers began putting this rickety railroad into operating condition. Gradually hundreds of American railroaders joined them.

They laid 75 miles of new steel across tough plateaus and deserts and through gorges connecting the "nowhere to nowhere" Trans-Iranian with a Caspian port of embarkation for Southeastern Russia. They have also extended the Shah's original line across the Baluchistan border, heading toward India.

Since the Allies officially occupied Iran—last year—United States and British engineers have turned blueprints into vast jetties, sheds, and workshops. They have installed modern equipment, have put thousands of experienced maintenance and operating railroaders in charge of the right of way. American locomotives are sharing the high-iron of Iran with their British cousins, hauling three times the volume of defense supplies to Russia that Iran's railroads carried a year ago.

American railroaders are getting set to do similar jobs—building and operating—on the new line to Alaska and new lines to other places. Some of these fighting-front fellows did their transportation bits in Europe during the first World War. During this World War they are going farther and doing the job better.

In Iran they are battling night and day in the cause of beleaguered Russia. They may have to build a long rail line around the eastern shore of the Caspian to get the vital supplies through. But if anyone can do it, those American railroaders can.

—*The Trackwalker*

AMERICAN LOCOMOTIVE • GENERAL ELECTRIC

114-32-9500

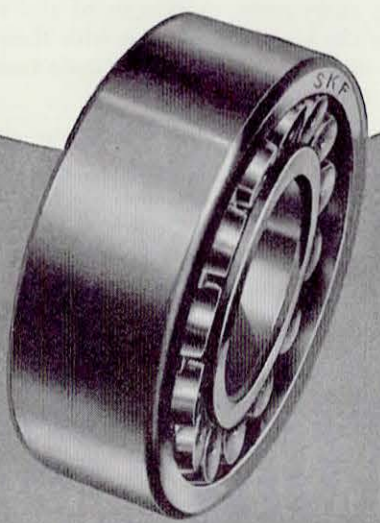
AGAIN, *it's* SKF

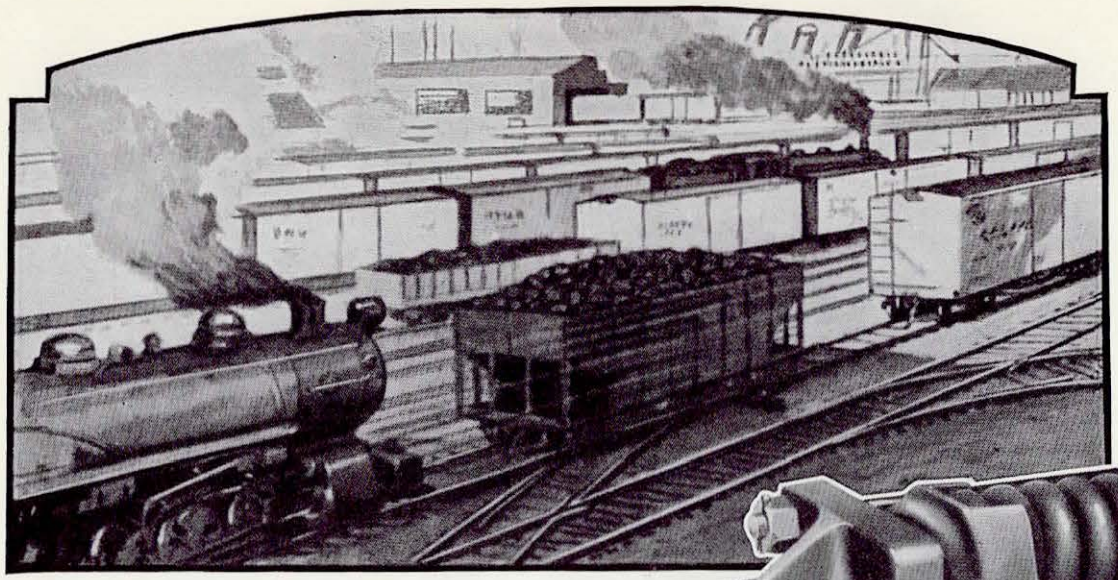
It is significant that *roller* bearings are being applied to axle journals and motor shafts of ten new Class GG1 electric locomotives and to the axle journals of 55 new locomotive tenders under construction at the Altoona shops of the Pennsylvania Railroad. It is further significant that among these bearings are SKF spherical and cylindrical roller bearings. These are repeat orders that indicate the approval of a great railroad for a great bearing. SKF Industries, Inc., Philadelphia, Penna.

5124

SKF

ROLLER BEARINGS





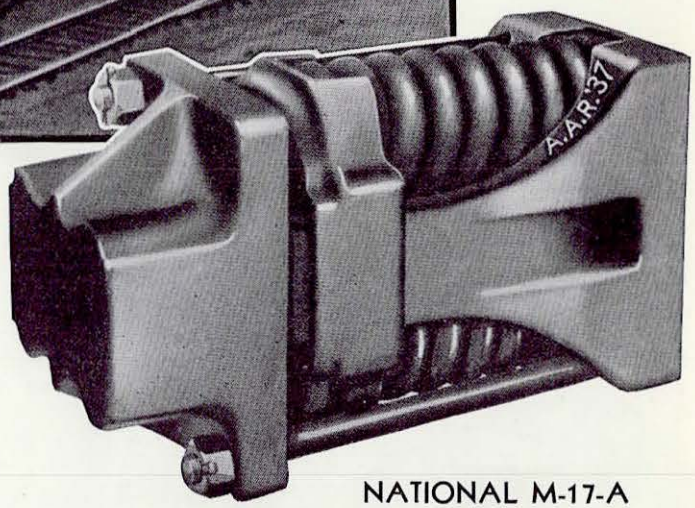
Car Protection Is Important

Adequate Draft Gear protection will reduce time out for repairs and increase car mileage.

When a loaded freight car shoots down the switch track at excessive speed, standing cars must be protected by draft gears of exceptional shock absorbing ability.

Safe cushioning of the heaviest or the lightest blows is necessary for the protection of car and lading.

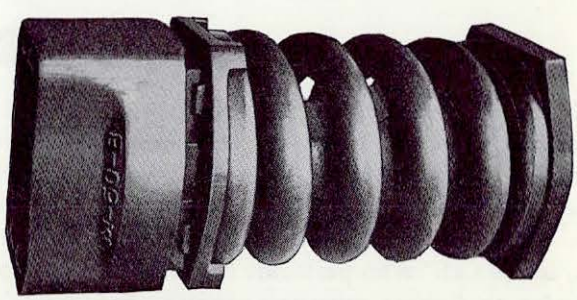
It was to meet such extreme conditions that National Draft Gears were designed. Smooth starting action and high ultimate capacity absorb light or heavy blows with the least possible shock.



NATIONAL M-17-A

NATIONAL FRICTION DRAFT GEARS

A. A. R. Approved

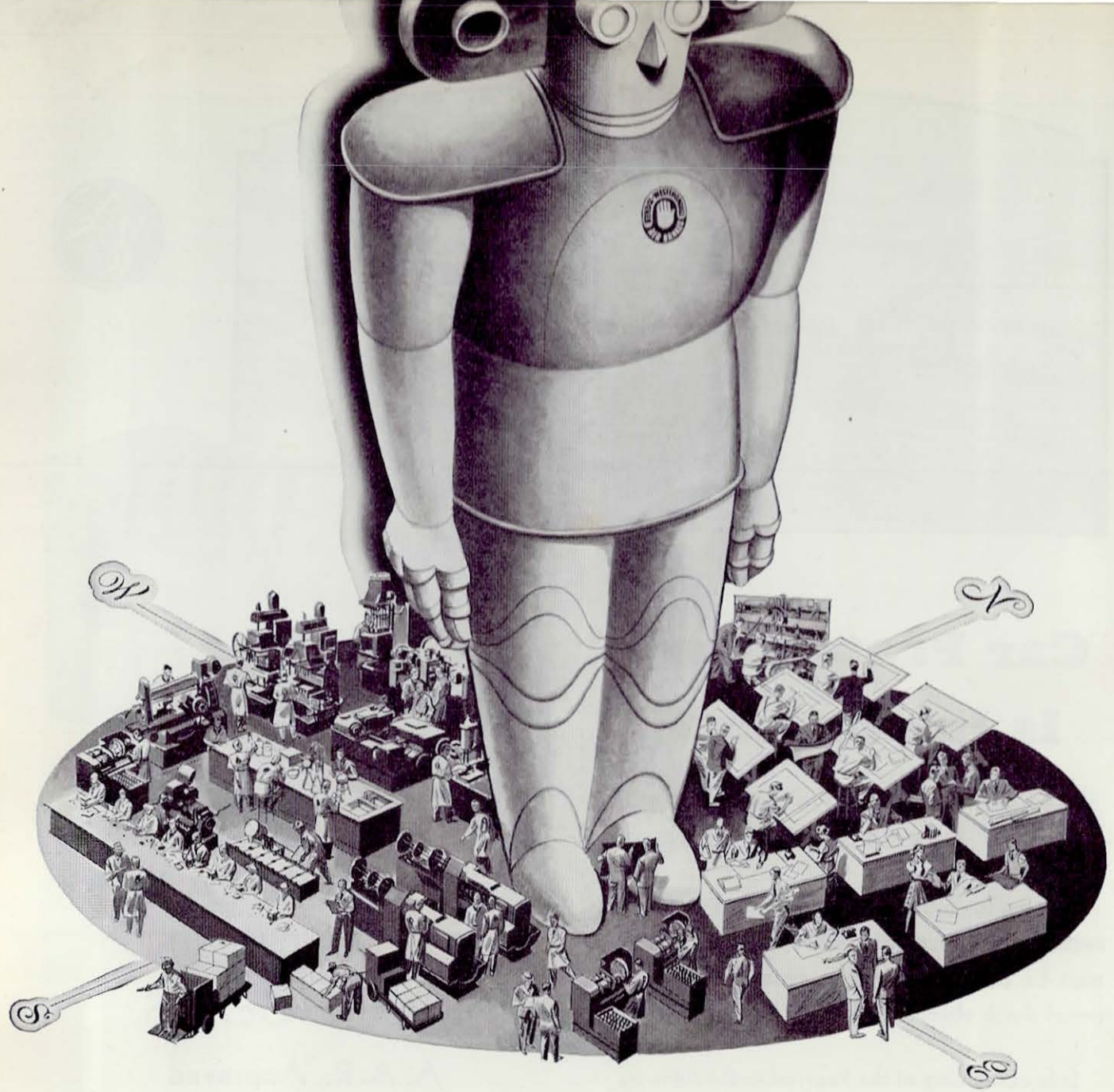


NATIONAL M-50-B

NATIONAL MALLEABLE AND STEEL CASTINGS CO.

General Offices: CLEVELAND, OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco.
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

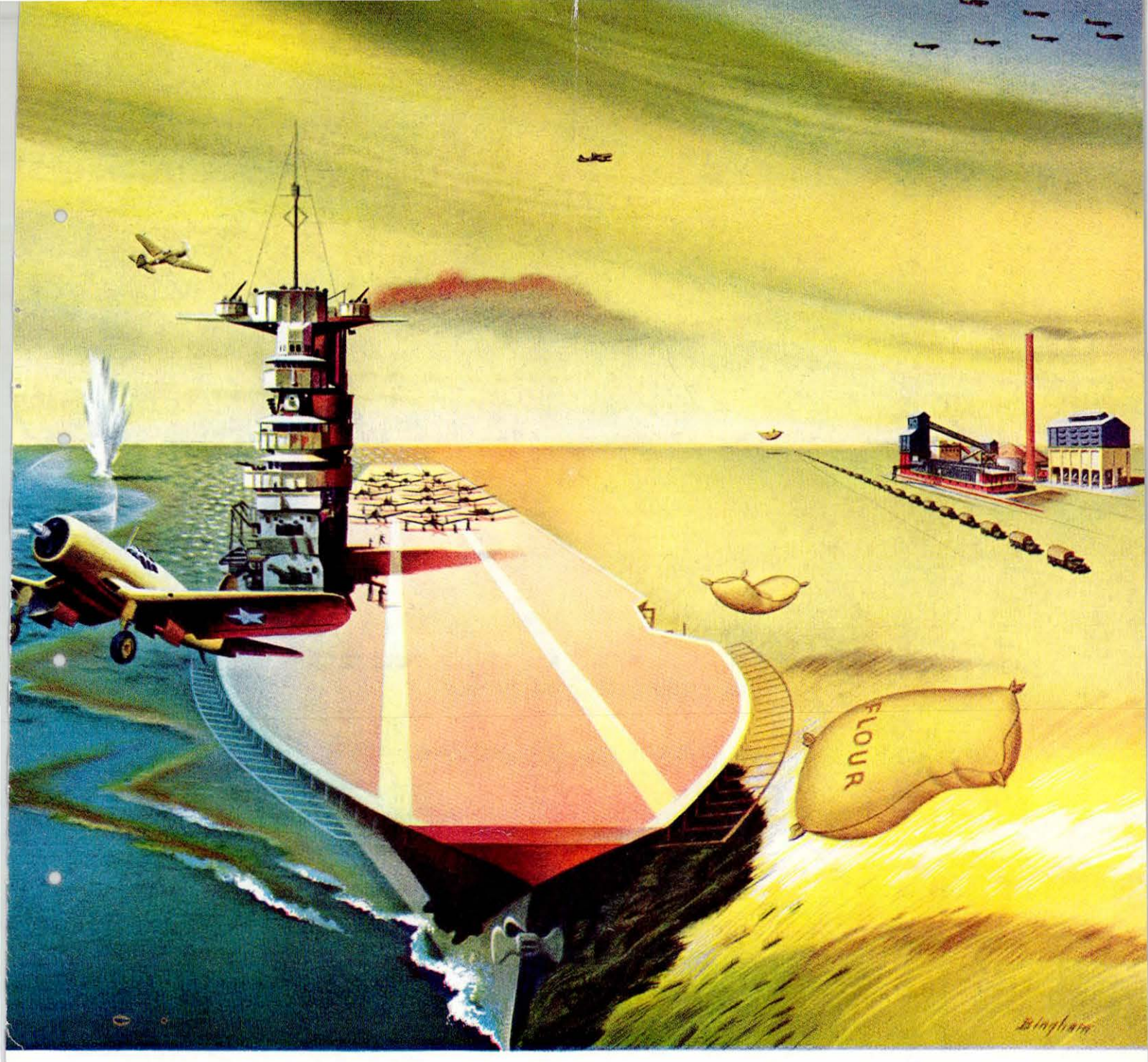


WHO IS A ROBOT

Webster is wrong, as any one of thousands upon thousands of Motor Transport Operators who know genuine Bendix-Westinghouse Air Brakes will attest ✶ They have come to know this genial gentleman in Bendix-Westinghouse armor as the "Extra Man in the Cab" who performs hundreds of everyday miracles to lighten countless control burdens . . . the individual who dependably dwarfs many emergencies, a real Patron Saint ✶ To us, who have known him intimately during more than ten years of his existence, he is all of this plus the personification of every skill and artistry which goes to make up genuine Bendix-Westinghouse Air Brakes and Air Control Devices ✶ With an integrity, matching that of the company he symbolizes, he's a two-fisted slugger who likes it best when the going's toughest . . . no job is too big for him . . . yet, your accounting department will know him for his gentle tread and a strict affinity for "blue ink" ✶ It will be well worth the effort to become acquainted with this Silent Partner of the Motor Transport Industry which offers such exclusive control advantages . . . Consult your local telephone directory for the Authorized Bendix-Westinghouse Distributor nearest you, today.

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE CO.
ELYRIA, OHIO

AN ORGANIZATION WHOSE UNDIVIDED EFFORT AND UNLIMITED RESOURCES ARE DEVOTED TO YOUR CONVENIENCE AND SAFETY



An Army Travels on its Ammonium Sulfate

Did you think we were going to say "An army travels on its stomach?" Well, it's the same thing.

Many of the essential chemicals used by farmers in raising plants and animals are derived from coal.

One of the fundamental needs of the farm is nitrogen. It produces bigger yields and better qualities.

When the First World War started, the shortage of imported nitrogen made it difficult to get good fertilizers. Today, large supplies of nitrogen are obtained from ammonium sulfate recovered from the coal carbonized in Koppers coke ovens.

Koppers serves the farmer and the food industry in many other ways.

Fruits are often destroyed by diseases caused by fungi, or by dropping before ripe. Diseases of fruits are prevented by Koppers Flotation Sulfur. The premature dropping of unripe fruit is being prevented through the use of synthetic plant hormones made from naphthalene of which Koppers is a major producer.

Koppers built the first large American plant for recovery of ammonium thiocyanate, an essential raw material in the production of complex organic thiocyanates for insecticide manufacture.

Farmers control animal parasites with coal tar products . . . they get their products to market on roads built of coal tars . . . they prevent decay and destruction of wooden farm structures through the use of lumber pressure treated with Koppers creosote . . . they use Koppers American Hammered Piston Rings in many farm vehicles.—Koppers Co., Pittsburgh, Pa.

Buy United States
War Bonds and Stamps

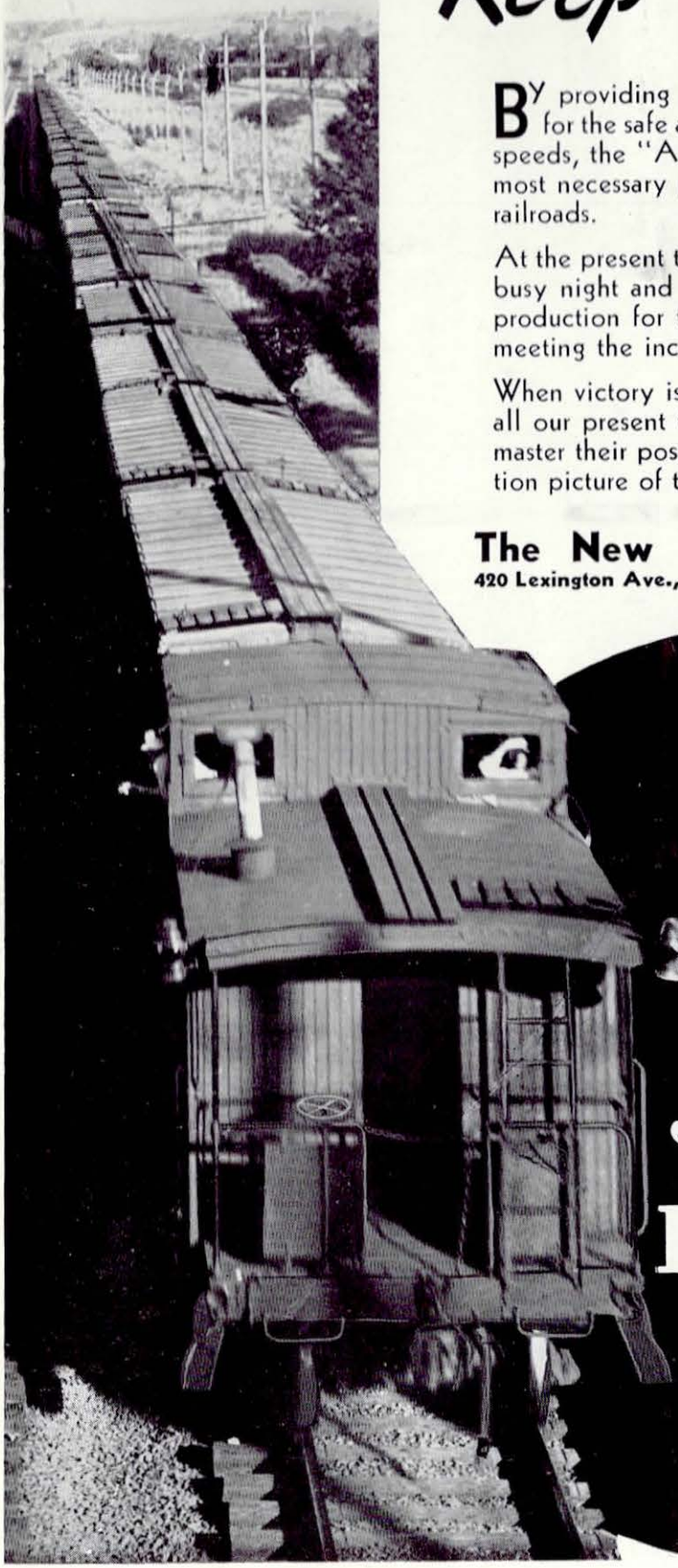
KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

Workers in our Bartlett Hayward Division are now privileged to wear the Navy "E" and Maritime "M" emblems.

TRANSPORTATION

BETTER BRAKES are helping to "Keep 'em Rolling"



BY providing the positive retardation control necessary for the safe and sensitive braking of heavy trains at high speeds, the "AB" Brake has and will continue to play a most necessary part in transportation achievements of the railroads.

At the present time our plants, facilities and personnel are busy night and day seven days a week turning out vital production for the defense of our Nation in addition to meeting the increasing requirements of the railroads.

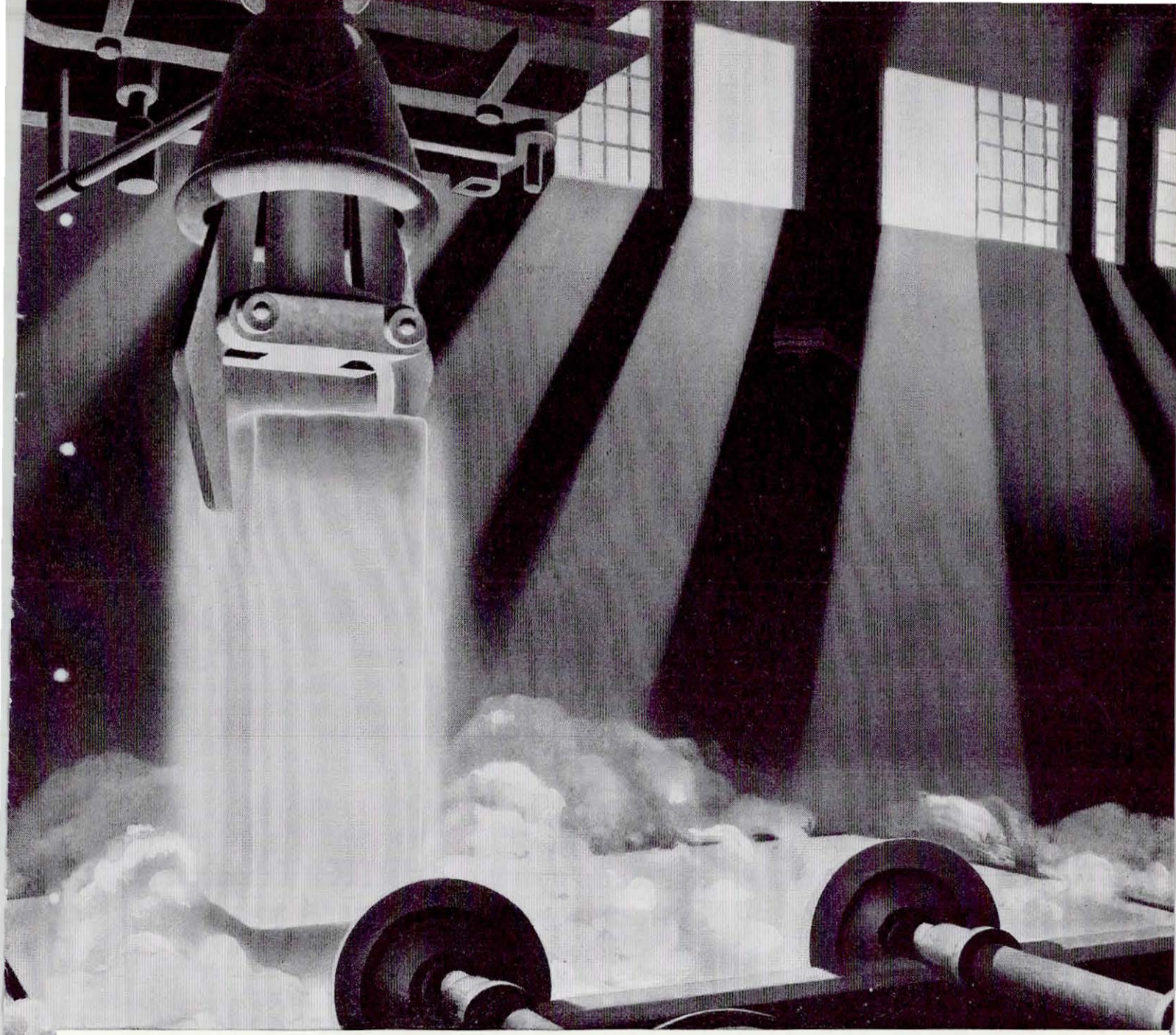
When victory is won we shall couple these war efforts to all our present time endeavor in helping the railroads to master their post-war problems in the complex transportation picture of the future.

The New York Air Brake Company

420 Lexington Ave., New York City. **Plant: Watertown, New York**

NY

"AB" BRAKE



PUTTING MUSCLE IN STEEL

STEEL—the strong man of America—is not by nature a Samson. Muscle must be developed by adding ferro-alloys which remove strength-stealing impurities and give extra qualities before the steel is tough enough to play its part in today's fast-moving world.

One of the most important of these alloys is ferromanganese. Used as a scavenger in nearly all grades of steel, it removes oxygen and minimizes the harmful effects of sulphur. With the addition of manganese, hot steel can be rolled without cracking.

Cleansing is not the only role that manganese plays in the giants' game of steelmaking. In alloying amounts, manganese refines the structure of steel, thus giving it extra strength and ductility. As increasing amounts of manganese are added, exceptional properties are obtained. For instance, a steel containing 13 per cent manganese withstands the tough torture of jagged rock on steam shovel jaws.

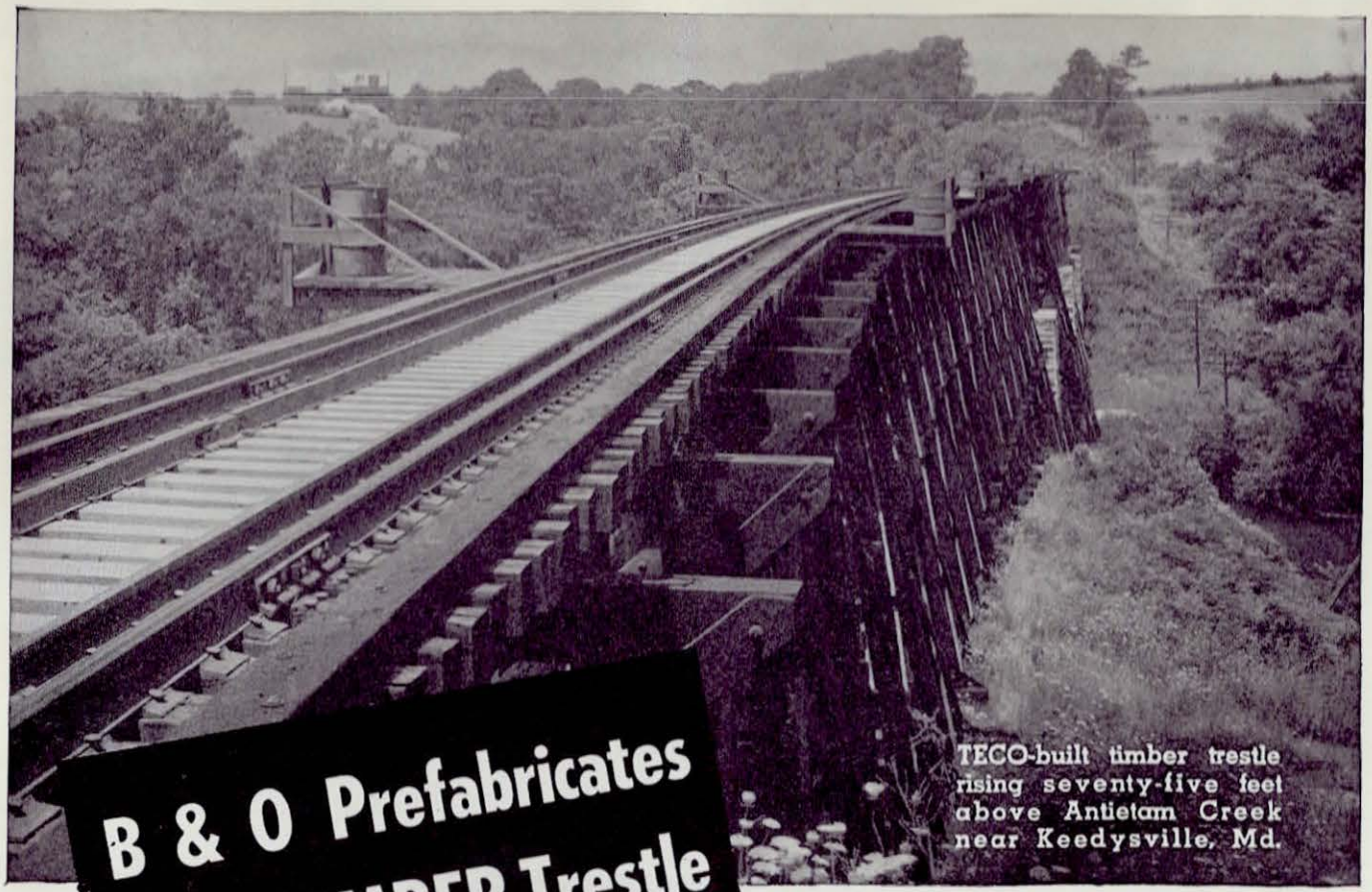
We do not make steel of any kind. But we have for over thirty-five years carried on intensive and continuous research and development with ferro-alloys and alloying metals used in steelmaking. These include manganese, chromium, silicon, vanadium, tungsten, zirconium, columbium, and calcium.

Low-carbon ferromanganese, medium-carbon ferromanganese, and silico-manganese—three manganese alloys which owe their present wide use to our efforts—have greatly speeded and simplified the production of many grades of steel, including stainless steel. You are invited to tap our reservoir of information about ferro-alloys and their use in making the quality steels of today.

• • •

The progress made by Electro Metallurgical Company in the manufacture and use of ferro-alloys and in the development of alloy steels has been greatly facilitated by metallurgical research in the laboratories of Electro Metallurgical Company and Union Carbide Company; by the advances in electrical furnace electrodes and techniques of National Carbon Company, Inc.; and by the broad experience in the production, fabrication, and treatment of metals of Haynes Stellite Company and The Linde Air Products Company. All of these companies are Units of Union Carbide and Carbon Corporation.

ELECTRO METALLURGICAL COMPANY
Unit of Union Carbide and Carbon Corporation
30 EAST 42ND STREET UCC NEW YORK, N. Y.



TECO-built timber trestle rising seventy-five feet above Antietam Creek near Keedysville, Md.

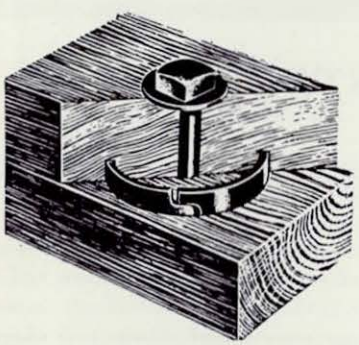
B & O Prefabricates Huge TIMBER Trestle

Railroad's own mill uses TECO Connector System to produce structural members for Antietam Creek Bridge

Reconstructing this bridge trestle to support mainline equipment, B. & O. produced one of the largest jobs of timber prefabrication it yet has undertaken. TECO Split Ring Connectors were employed throughout to augment the strength of stress-bearing joints.

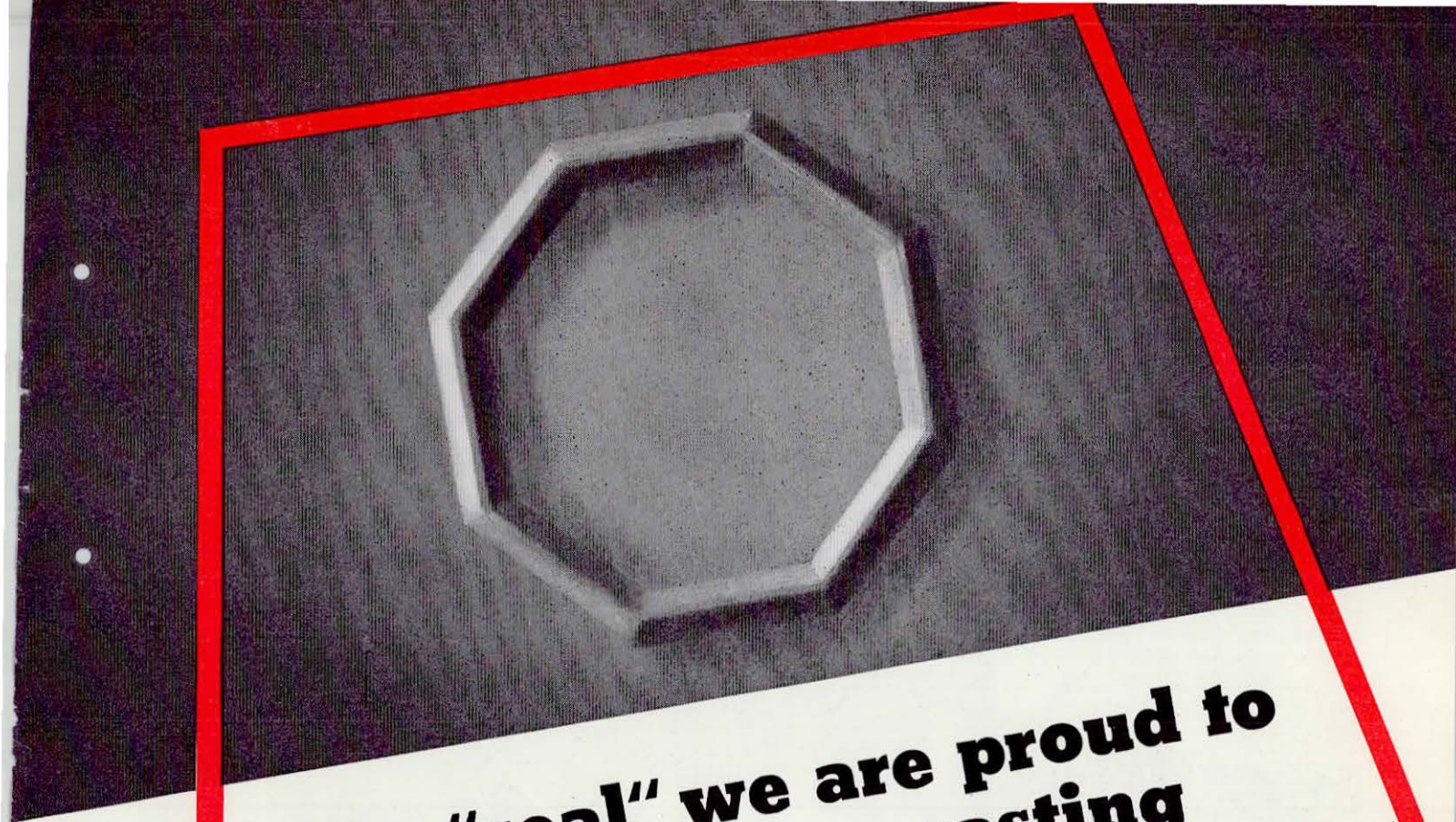
Use of TECO Connectors did away with most of the bolts, plates, and angles formerly specified in heavy timber construction. Assembly of members was simplified. Steel, wood, time, and money were saved.

This installation is a striking example of how timber, engineered under the TECO Connector System, can serve the railroads. *Write for details!*



The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood . . . brings the full structural strength of lumber into play.

Timber ENGINEERING COMPANY
WASHINGTON, D. C. PORTLAND, ORE.



The "seal" we are proud to put on every casting

ON every steel casting produced by American Steel Foundries there is cast a raised Octagon trade mark . . . the symbol of an organization that for decades has been a producer of good steel castings.

That Octagon denotes the results of years of research work . . . years of progress in foundry practice . . . years of meeting exacting requirements for the Army and the Navy and in the industrial and railroad fields.

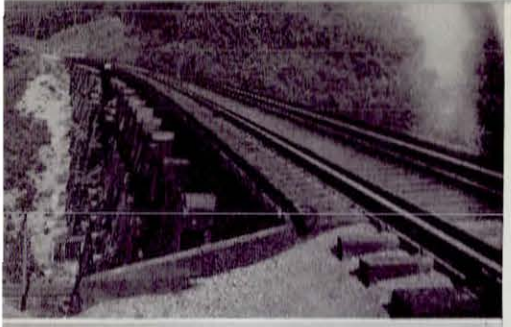
It is the symbol of the largest producer of steel castings in America.

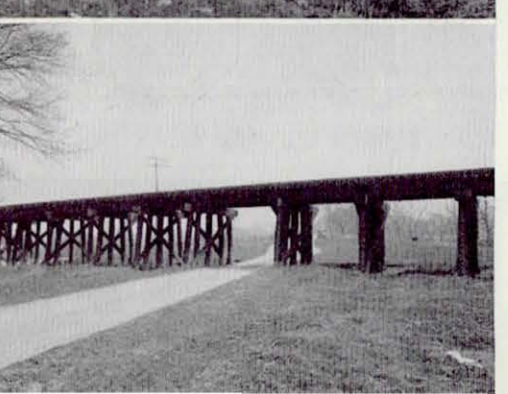
Within each octagon is the initial letter of the plant that produces the casting

G	E	I	V	A	H	C
GRANITE CITY	EAST ST. LOUIS	INDIANA HARBOR	VERONA	ALLIANCE	HAMMOND	CAST ARMOR PLANT

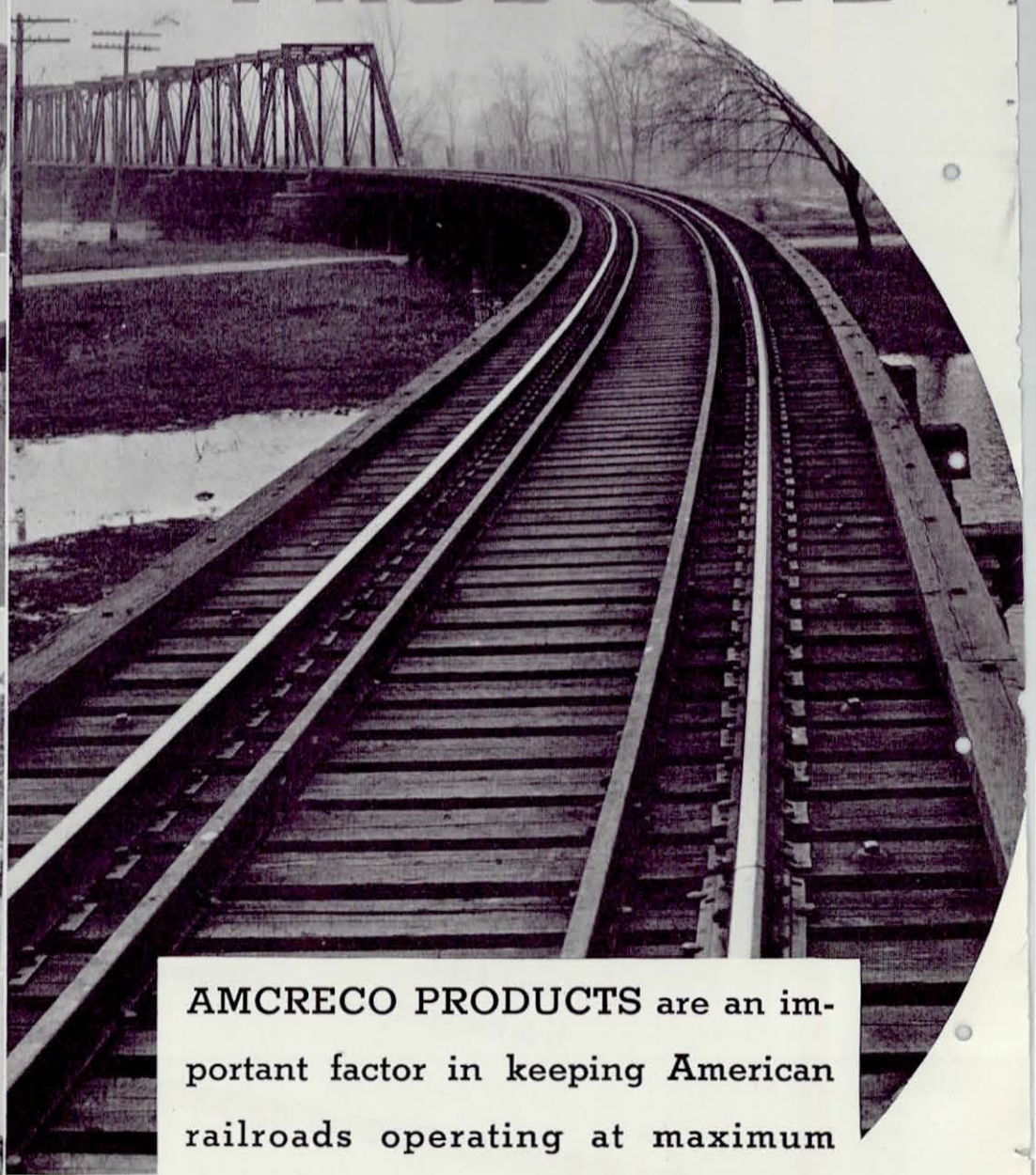
AMERICAN STEEL FOUNDRIES

Chicago





AMCRECO *Creosoted* PRODUCTS



AMCRECO PRODUCTS are an important factor in keeping American railroads operating at maximum capacity, and in helping conserve materials needed for war production.

AMERICAN CREOSOTING COMPANY
INCORPORATED

COLONIAL CREOSOTING COMPANY INCORPORATED

AMCRECO LOWRY PROCESS CREOSOTED WOOD

GEORGIA CREOSOTING COMPANY INCORPORATED

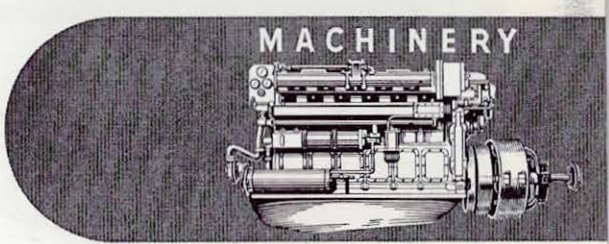
ADDRESS INQUIRIES TO CHICAGO, ILL., OR LOUISVILLE, KY.

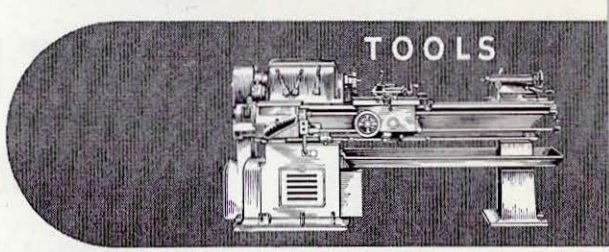
TIES • POLES • PILES • TIMBER

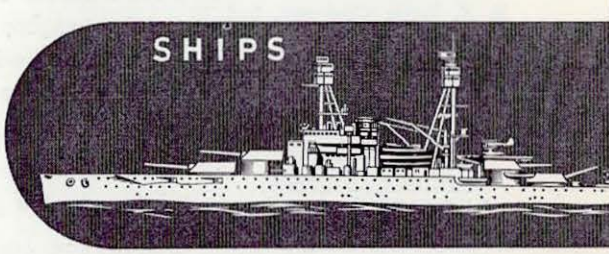
MEASURING *VIBRATIONS*

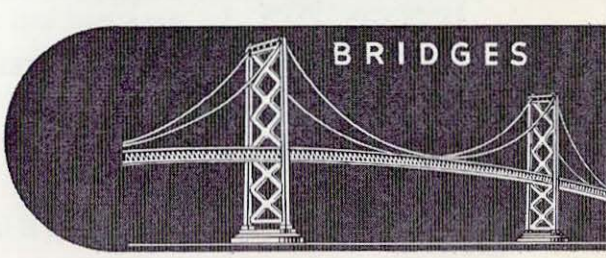
•LOADS, FORCES, STRAINS...

in...









VIBRATION
Inducing, measuring and recording equipment:
(Partial list)
Bernhard Mechanical Oscillator (OS-1), (OS-4)
Johnson Vibration Testing Machines
Vibration Velocity Unit
Integrating Unit
Vibration Meter
Sound Level Meter
Vibration Pick-up
Amplifiers
Oscillographs
Cathode Ray, String
Recorders, Pen and Ink
Balancing Equipment
Impact Register
Ride Recorders, Two-Way; Three-Way
Vibragraph
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MEASURING vibrations . . . determining, recording and analyzing strains, loads, forces and accelerations and their effects on materials and structures of all kinds . . . that is the unique function of Waugh Laboratories.

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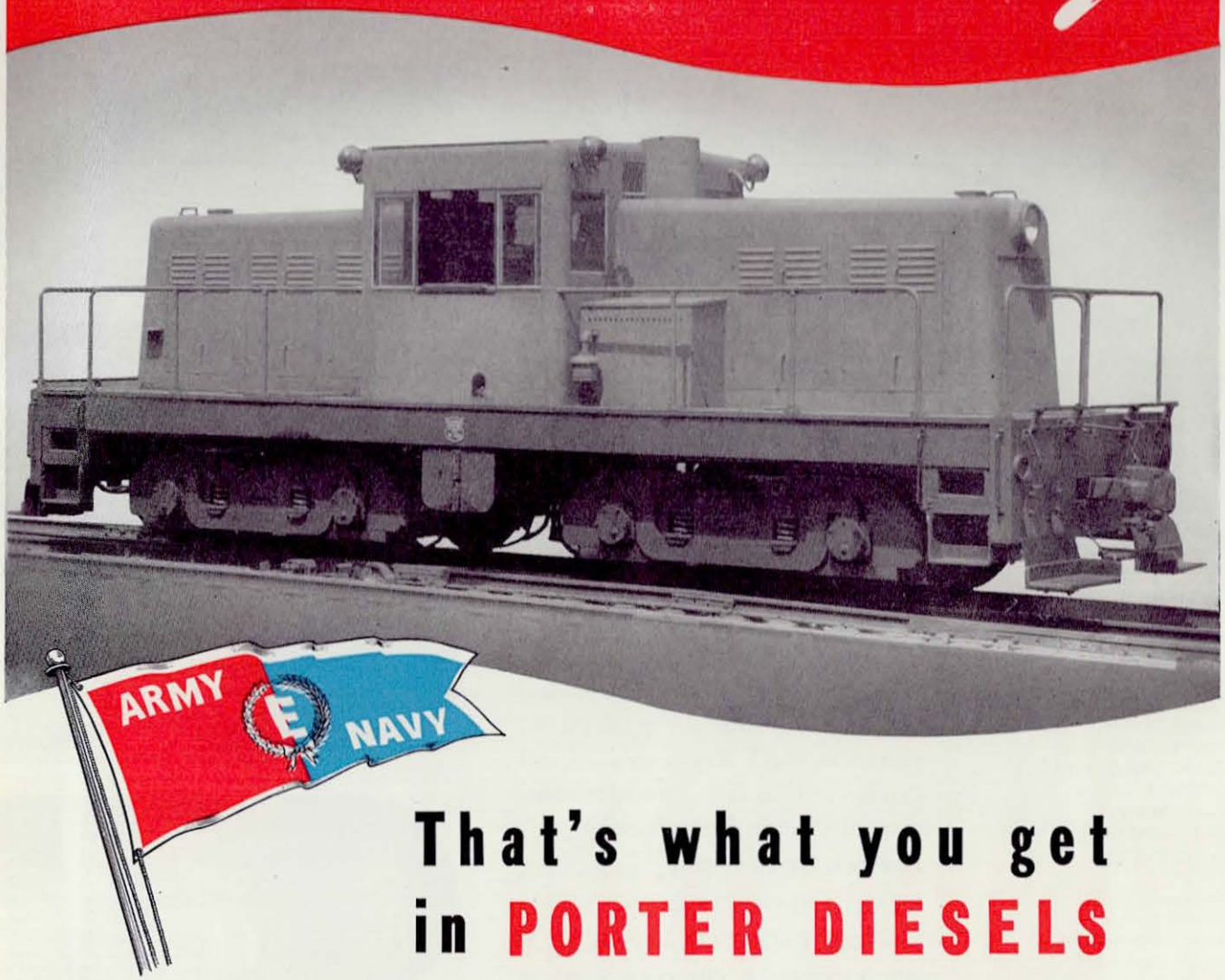

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Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

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In This Issue

Page

Railroads Must Have Equipment ***640***

A report on the annual meeting of the National Association of Shippers Advisory Boards in Chicago, at which both Messrs. Pelley and Eastman declared that rail transportation is approaching the critical stage.

Military Rail Service Gets Set for Conflict ***648***

An abstract of an address by Brig. Gen. Carl R. Gray, Jr., delivered recently before a meeting of the Roadmasters and Maintenance of Way Association, in which he discussed the goals of the railway military service.

Material Supplies Decline Further ***658***

An analysis of statistics on railway buying for the first seven months of the current year, which show that the carriers are facing continued declines in the amount of material and supplies purchased and in the inventories on hand.

EDITORIALS

Shall the Railroads Be Sabotaged? 637
War-Time Switching 638
Salvaging Waste Light 638
Labor Becoming Governing Factor 639
Union Political Strategy 639

GENERAL ARTICLES

Railroads Must Have Equipment 640
C. McD. Davis Elected President of the Atlantic Coast Line 643
Business Research for Railroads, by George Rugge 644
Military Rail Service Gets Set for Conflict, by Brig. Gen. Carl R. Gray, Jr. 648
Are Accident Reports Accurate? 651
Why St. Louis Is No Bottleneck 655
Material Supplies Decline Further 658
Motorailer Connecting Service for Missouri River Eagles 661

COMMUNICATION **663**

RAILROADS-IN-WAR NEWS **664**

GENERAL NEWS **670**

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

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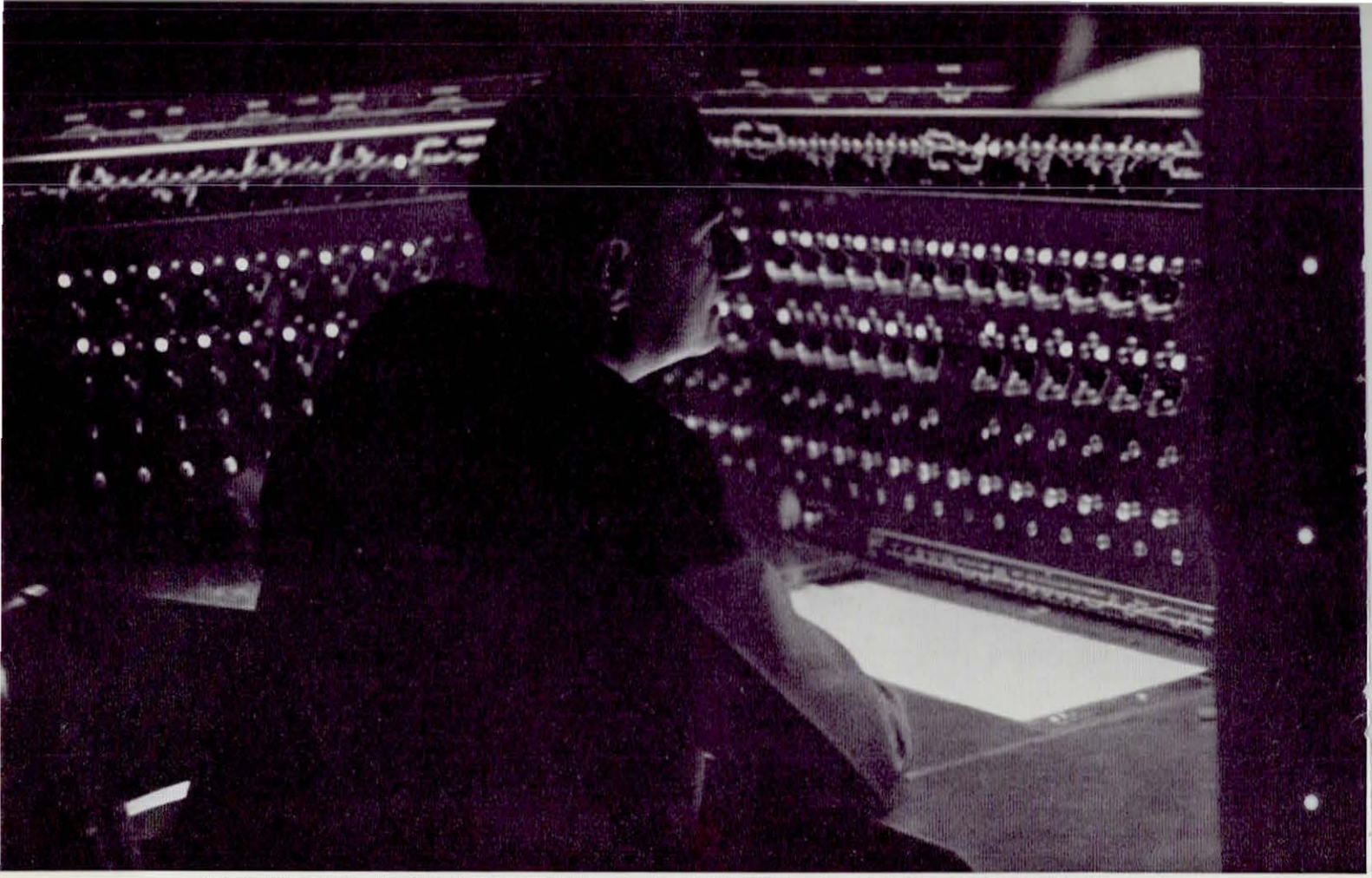

DISPATCHER EASILY HANDLES A COMPLETE BUSY SUB-DIVISION

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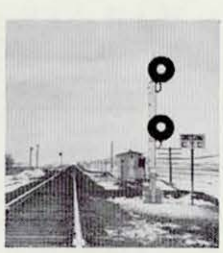
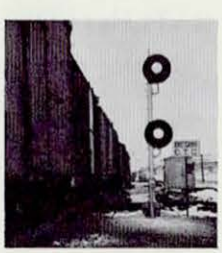
IN many single track territories, essential wartime movements of men and materials have caused an increase in traffic to between 40 and 70 trains daily. This traffic burden causes serious accumulative delays under a train order method of operation. • With "Union" Centralized Traffic Control there is no delay in the authorization of train movements. Signal indications are displayed in the field in direct response to manipulation of the control machine and the control system functions at practically the same speed regardless of the number of trains moving over the territory. As a result, the dispatcher has ample time to plan efficient train operation, based upon the minute-to-minute progress of all trains as shown by the miniature track model. Train direction is greatly simplified, the delay in transmission of train orders is eliminated, and the entire operation is surrounded with additional safety.

Restores switch lever to normal

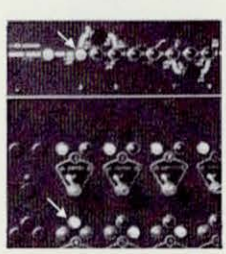
Clears signal lever



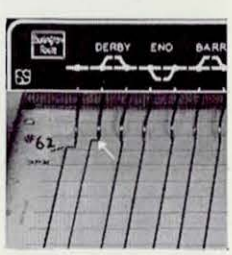
Switch operates and signal clears



Train enters "OS" track section



"OS"es on track model



"OS" records on train graph

2083

UNION SWITCH & SIGNAL COMPANY
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The Week at a Glance

MORE EQUIPMENT!: Mr. Pelley told the Shippers' Boards last week (as reported herein) that "there is no further margin left in the reserves represented by unserviceable and surplus equipment." Even if the railroads get the locomotives they are asking for, each locomotive available next year will have to turn out 7 per cent more ton-miles than it is now doing, if traffic foreseen for a year hence is to be handled. Also, even if the carriers get the 80,000 freight cars they are asking for during the next year, each car will have to produce 6½ per cent more ton-miles if traffic predicted for a year hence is to be moved.

●

LOYALTY TO WHOM?: The citizen owes his loyalty *to his country—not to the persons who happen to be in power*, even in time of war. Thus the leading editorial in this issue introduces its discussion of the threatened sabotage of the railways (and, of course, of the war effort)—not by Nazi agents, but by government officials who refuse to face the facts regarding railway needs for equipment and materials.

●

DWINDLING SUPPLIES: In July of this year the railroads received 10 per cent *less* repair and maintenance material than in June, and 13 per cent *less* than in July, 1941. Aggregate materials in stock also declined in July—being 2 per cent less at the end of the month than at the beginning. July was the fourth successive month in which receipts of repair products have declined from the month preceding. Details of the dwindling of supplies necessary to assure efficient railroad service are summarized in an article in these pages, by our purchases and stores editor.

●

WASTED MANPOWER: Westbrook Pegler in one of his columns this week again mentioned the railroad featherbed rules as a source of wasted manpower—which should be eliminated before the government proceeds to draft or otherwise exercise compulsion upon labor. He made quite clear his understanding that these rules were originated as a means of protecting employees, but that they have been widened to the point where they go far beyond this legitimate purpose. He also called attention to the touchiness of the union's spokesmen on this featherbedding question—and how they try to make out that the mention of this abuse is a slander on railroad employees, which, of course, it is not. Mr. Pegler also reminds us that the new economic director, Judge Byrnes, is the gentleman who wrote the famous Supreme Court decision permitting a truckers' union to hold up trucks entering New York and force them to take on unneeded employees.

●

RAILROAD SOLDIERS: Brigadier General Carl R. Gray, Jr., explains the organization of the Military Railway Service in an address which is abstracted elsewhere in these pages—telling how personnel is being trained for its duties in keeping our advancing armies supplied. The soldiers are learning their railroading by actual practice (but some of them have had a lot of experience already). General Gray says that the type of locomotive to be used is a small 2-8-2 and that track will be maintained to branch line standards.

●

FLOODS AROUND D. C.: The Potomac, the Rappahannock, the Shenandoah and the James were on a rampage over last week-end—as reported in the news pages herein. The B. & O. diverted a very heavy freight movement to other carriers to minimize the delay in its operations occasioned by the inundation. The railway bridge across the Potomac at Washington was closed to traffic for about five hours on the 17th as a precautionary measure and the R. F. & P. was also hit by washouts at Fredericksburg. Operations on the C. & O., N. & W. and Southern were also affected, but less seriously.

●

ST. LOUIS GATEWAY: How the Terminal Railroad Association conducts its operations—so that one of the principal arteries of war-related traffic has avoided congestion—is revealed in an illustrated article in this issue, by our transportation editor. In 1938 T. R. R. A. handled a monthly average of 75,000 cars. By 1940 the mean monthly movement was 82,000. By May, this year, the figure had climbed to almost 149,000, with no occasion to foresee a let-up; and, still, no bottleneck.

●

REPORTING ACCIDENTS: The Interstate Commerce Commission examined accident-reporting methods of three pairs of railroads—one each in the East, West and South—and has issued a report, summarized herein, in which it sharply criticizes some of the practices it discovered. Some carriers, it says, "expended much time and effort in finding some means by which a report of a particular accident could be avoided, the files being practically barren of anything related to accident prevention. An equal amount of effort devoted to bona fide accident prevention might well have led to the saving of many lives. . . . The time to acquire a safety record is before an accident occurs."

●

WHAT NEEDS KNOWING: The railroads have engaged in and are now conducting a wide variety of studies of the kind known as "business research," some of the range of subject matter being revealed in the concluding part of George Rugge's analysis of this type of investigation, published in digest elsewhere herein. For example, some forecasting of general business conditions is done as far as five years ahead, actual and potential traffic by divisions and commodities is being surveyed, train operations are being studied with a view toward economy, further application of machine accounting methods is being painstakingly investigated. The author lists 30 further similar inquiries which railroad officers have indicated they would like to have made—and 20 principles are enumerated as advisable to observe for success in this endeavor.

TAXES ON FREIGHT RATES: Despite the protests of OPA and others, the new tax bill carries a provision for a 3 per cent excise levy on amounts paid for the transportation of property, except coal, where an impost of 4 cents per ton is made. The Senate finance committee opposed this levy, but it was insisted upon by the House conferees. The excise on passenger travel has been doubled, being raised from 5 per cent to 10.

●

MORE REGIMENTATION: Economists in the Department of Agriculture are predicting that a "zoning or certificate system which will deprive sellers of distant markets" may be adopted in connection with freight traffic. These experts also contend that "horizontal percentage rate increases will not be necessary" on the railroads—the idea apparently being that the carriers can absorb increases in their "variable costs." These significant opinions are summarized in the news pages herein, where it is also revealed that the WPB has created a division which "has the authority to work out systems of transportation priorities." The boss of the new division is a professor.

●

MO. P. EAGLET: A double-ended streamlined motor rail car — to connect Lincoln, Neb., with the Missouri Pacific's "Eagle" streamliners at Union, Neb., is described and illustrated elsewhere in these pages. The run is about 48 miles and the car will make two daily round-trips. The livery of the car matches that of the "Eagles," which it serves as a connection.

●

McNEAR TURNED DOWN: George P. McNear, whose T. P. & W. is being operated by the ODT because he did not satisfy the Administration at Washington in his conduct of labor relations, has tried unsuccessfully to get a further hearing of his case by the WPB. This board not only denied his request but expressed impatience at his criticism of Judge Hilliard, whom, despite his record as an Adjustment Board referee, the WPB chose to dispense justice in Mr. McNear's case. The T. P. & W. president also wired Joe Eastman alleging "featherbedding" on the T. P. & W. and suggesting that discontinuance of this practice on a national scale would add to the effective motive power supply. Mr. Eastman gave him a short answer, in which he questioned the accuracy of Mr. McNear's figures on T. P. & W. "featherbedding."

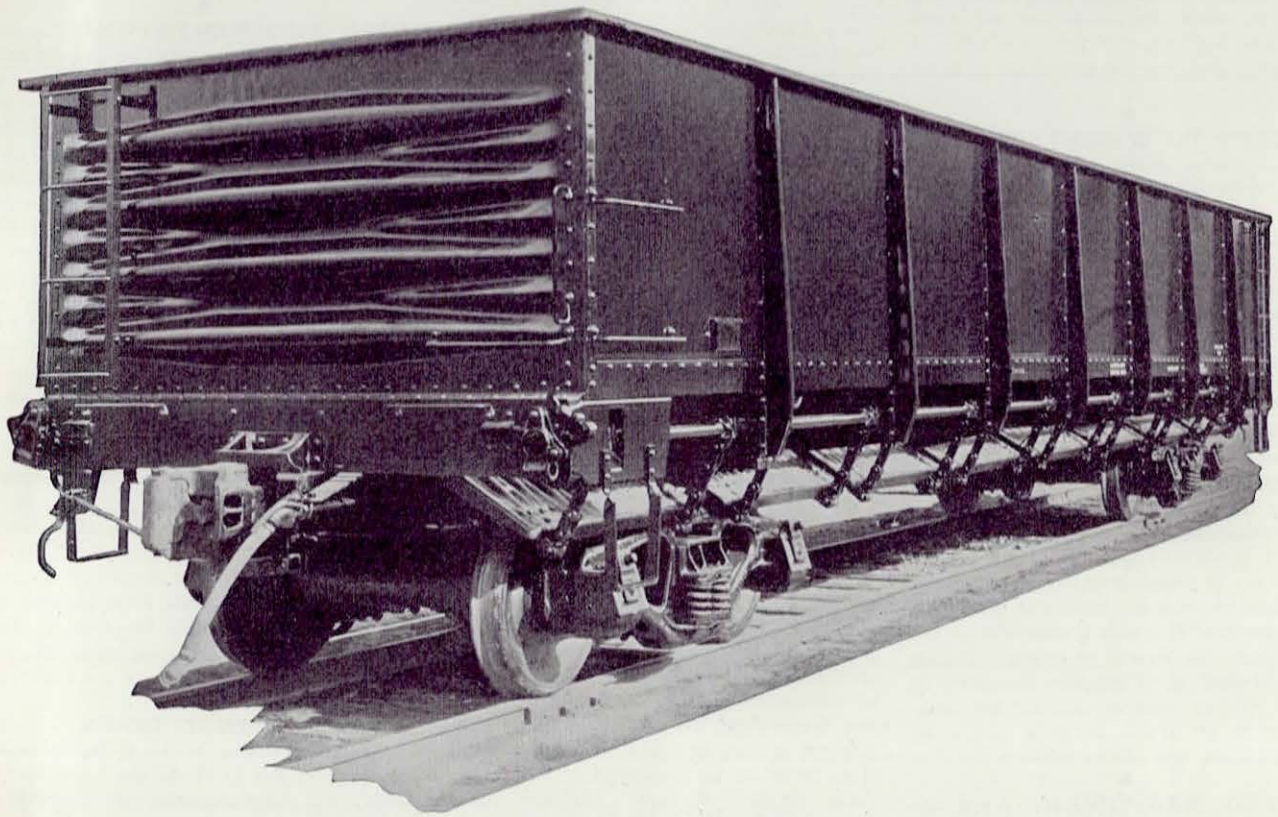
●

SAVING LIGHT: By proper use of color in, on and around machines "it is practical to increase the illumination from most lighting systems 100 per cent." This statement appears in an editorial herein, which discusses this economical method of encouraging an increase in the efficiency of indoor productive processes.

●

"IRON DOUGHBOY": A picture of the new standard Army locomotive for overseas service appears on page 666 in the news pages herein.

DREADNAUGHT ENDS



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RAILWAY AGE

Shall the Railways Be Sabotaged?

The railways will be more effectively sabotaged by our government than they could be by alien saboteurs and fifth columnists unless their requests for more equipment and materials are promptly granted. This might be due to ignorance and good intentions; but patriotism requires those well-informed to speak plainly. For patriotism is loyalty to one's *country,* and not to *those in power,* even in time of war.

At the meeting of the National Association of Shippers' Boards in Chicago on October 16, President Pelley of the Association of American Railroads declared, "There is no margin left in the reserves represented by unserviceable and surplus equipment," and stated the railroads have sought governmental authority for acquiring 900 new locomotives, 80,000 new freight cars, 2,100,000 tons of new rail and proportionate amounts of maintenance materials before October 1, 1943. At the same meeting Director of Defense Transportation Joseph B. Eastman said, "When it comes to taking in slack, the shippers and railroads have done so well that we are pretty close to the end of the rope, and there is clear and definite need for more new locomotives and new freight cars." These are explicit warnings from the two most authoritative official *railroad* and *government* sources.

Let us measure the requests the railways now make by *new* equipment acquired in the past.

In 1918 they were under government operation. Freight traffic was 12 per cent larger and passenger traffic 23 per cent larger than in 1916. The railways in 1916 and 1917 had acquired 5,293 locomotives, 227,221 freight cars, and 3,656 passenger-train cars. And yet in 1918 the *government itself* acquired about 3,500 locomotives, 67,100 freight cars and 1,480 passenger-train cars.

In 1929 the railways were under private operation. Their two years' increase in freight traffic over 1927 was 9 per cent, and there was a decline of 8 per cent in their passenger traffic. In 1927 and 1928 they had acquired 1,645 locomotives, 109,450 freight cars and 3,141 passenger-train cars. Nevertheless, in 1929 they acquired 926 locomotives, 82,240 freight cars and 1,254 passenger-train cars.

The railways have been under private operation, but subject to government control of materials during the last two years. Their two years' increase in freight traffic in June, 1942,—the latest month for which complete statistics are available—over June, 1940, was 79 per cent and in passenger traffic 106 per cent. In 1940 and 1941 they acquired 1,068 locomotives, 132,325 freight cars and 441 passenger-train cars. And in the first eight months of 1942 they were allowed to acquire only 523 locomotives, 53,355 freight cars and virtually no new passenger cars.

To summarize: Their freight traffic has increased relatively almost *seven* times as much within the last two years, and their passenger traffic almost *five* times as much, as in the two years ending with 1918. Their freight traffic has increased relatively nine times as much within the last two years as in the two years ending with 1929, and their passenger traffic—instead of declining as then—has more than doubled. And yet within the last two and two-thirds years the government has allowed them to acquire less than *one-fifth* as many locomotives as they acquired in the three years ending with 1918, and less than two-thirds as many as in the three years ending with 1929. It has allowed them to acquire less than *two-thirds* as many freight cars as in the

Efficiency FOR VICTORY

three years ending with 1918, and not as many as in the three years ending with 1929. And it has let them acquire only about *one-tenth* as many passenger-train cars as in the three-year periods ending with 1918 and with 1929.

In view of this *actual experience*, the request for 900 locomotives, 80,000 freight cars and no passenger cars is very modest, indeed—especially when accompanied by estimates that freight traffic will increase 15 per cent in 1943 and passenger traffic a great deal more.

Does the nation want its war and civilian traffic handled? Only the War Production Board, with its control of materials, can now decide whether it *will be* handled.

War-Time Switching

The yards of American railways vary greatly as to type, kind and size. In one respect, however, they are all alike—all are handling more cars per day than would have been thought possible a year or two ago. In striking contrast to the situation during the last war, yards are now fluid instead of blocked, thus enabling advantage to be taken of the present faster road speeds.

The reasons are many. One of the most important is the improvement in yard facilities. Many of the principal yards in the East and Middle West are equipped with car retarders, which have been invented since the last war. Lighting facilities have been improved so that night operation proceeds with little or no perceptible reduction in speed. Communication and devices for expediting paper work have been worked out to a point where cars are no longer delayed by office detail.

Scientific study of design and operation, and the application of principles evolved by research, have also been of prime importance in enabling yards to handle up to 3,000 cars a day over their "rated capacity." It is unquestionably true that study was given to yard operation prior to 1917, but it is also true that, in the last two decades, the basic theory of yard operation has changed. Formerly, yards were considered as places to store cars until such time as the yardmaster could get them out and on the way to the next terminal. Each yard was operated as an individual entity, and not with regard to its relation to other yards. The operation of main-trackers changed this theory. Yards became instruments to facilitate the forwarding of cars instead of for the storage of freight between road movements. One of the features of present-day operation is the movement of trains through line yards without breaking them up. War-time traffic conditions have added to this the movement of solid trains through large interchange terminals, as illustrated by the handling of oil trains from the Southwest to the East and of coal trains from the Pennsylvania and West Virginia mines to New England.

Credit for this complete change-over to far more efficient operation goes to the manufacturers of devices to speed yard operations; and this applies to cars, locomotives, track and office machines as well. Further credit should be given to the standing committee on yard design of the American Railway Engineering Association for its many studies, particularly of hump yard design. Many committees of the American Association of Railroad Superintendents have also contributed greatly to the art of yard operation. Even in these busy days, though, this should not be permitted to become a static art. Under the acid test of emergency operation, much new and valuable information should be acquired about yard design and operation that will be valuable during war-time and after the war is over. The yards of today are really vast testing and research laboratories.

Salvaging Waste Light

The almost superhuman effort being made to increase production in this country is focusing attention on improvements that were in the early stages of development in more normal times, but because of their importance are being greatly speeded up in the emergency. Steady and substantial progress has been made for many years in improving shop lighting, because of its effect on the quality and quantity of production and in the reduction of accidents.

A special type of industrial lighting research has been conducted by the Philadelphia Electric Company, in collaboration with the E. I. du Pont de Nemours Company. This was first announced in September, 1941, and indicated that the creating of a favorable color contrast in the immediate vicinity of the work greatly improves the ability to see quickly, accurately and comfortably. The latest developments in this research were outlined in a paper entitled, "Salvaging Waste Light for Victory," which was presented at a recent wartime lighting conference of the Illuminating Engineering Society. The authors of the paper are Arthur A. Brainerd, supervisor of the Lighting Service Section of the Philadelphia Electric Company, and Robert A. Massey, of the du Pont de Nemours Company.

The earlier researches and tests showed that the refinishing of the upper side walls and ceiling of a room or shop, the refinishing in different colors of the floor and that part of the wall immediately above the floor, and the painting of the machines in so-called three-dimensional colors, greatly improved the effectiveness of the lighting. The authors make the statement that "by means of a scientific use of color it is practical

to increase the illumination from most lighting systems 100 per cent without any change in lighting equipment or any increase in color."

Three-dimensional colors on the machines improve the visibility "by spotlighting the working arrangement with light colored paints of contrasting hues." The research has progressed to a point where a special color selector has been developed to insure "high efficiency painting." It is granted that much still remains to be done to achieve maximum results, but the value of the work done thus far is evidenced by the fact that many industrial plants have adopted the new practice with satisfactory results. It is, in effect, a new phase of the science of industrial lighting, which while in course of development before the war, is now being intensified and extended at an unusually rapid pace in the effort to increase war production.

Labor Becoming Governing Factor

During the season now closing maintenance of way officers have faced multiplied and increasingly acute shortages of materials tending to limit the work that could be done. And as we progress further into the war these shortages may become more serious. But there are mounting evidences that shortages of materials, serious as they are, may be relegated to secondary importance by an even more acute shortage of labor.

The railways have not yet suffered seriously from a scarcity of maintenance of way labor. Few of the larger gangs have been up to normal strength, and turnover has been increasing; but in the main the railways have been able to carry on their programs by exerting special efforts to keep their gangs relatively well filled. As the season advanced, however, the difficulty of getting enough men increased; and with the expanding demands of our military activities and our defense plants, the competition for labor is going to be far keener next spring.

The demands next year for work on tracks and structures will be heavy; for they are being subjected to the wear and tear of a traffic of record volume; and this wear and tear must be made good if continuity of satisfactory and adequate transportation is to be assured. The problem confronting the maintenance officer, therefore, will be to utilize the labor available in such ways as to secure the greatest constructive service from it. To this end, several measures warrant careful consideration.

First is enlargement of the program of work to be done during the winter. Most maintenance work in most of the country can be most efficiently done during the summer. But any work done during the winter will reduce the peak load of summer. Furthermore, winter work provides employment for men, who, if laid off, will probably go into other industries and be unavailable next spring.

Another measure conducive to the retention of labor is the provision of adequate facilities for their housing. The nature of much maintenance of way work necessitates facilities for the care of the men engaged in it. A number of years ago the improvement of camps and camp cars received much attention; but recently interest in these facilities has lagged. Facing an acute shortage of labor, several railways are now reconstructing and modernizing their camps and camp cars to make them more attractive.

And present conditions demand careful scrutiny of all tasks in order to select and perform those most immediately important to the handling of traffic. The year 1943 will tolerate no frills in maintenance. That railway or division will have the most serviceable track which applies the labor available to the primary objectives of providing a roadway over which the nation's supplies can be moved with the greatest dependability. And, with the outlook for labor what it is, that railway will make the greatest progress next year which prepares best now to cope with conditions so rapidly becoming unfavorable.

Union Political Strategy

The Democratic nominee for the governorship of New York, State Attorney-General Bennett, recently came out strongly for the construction, now, of the St. Lawrence Seaway—which even President Roosevelt believes should be put aside until the end of the war.

The St. Lawrence development is a major project in the general program for socializing the economy, by adding greatly to government-owned power and transportation plant—placing it in unequal competition with privately-owned railroads and utilities. Competition of the Seaway with the railroads would be particularly inequitable, since *no tolls are to be charged* to boat operators for the use of this expensive facility. If built, the Seaway will either (1) deprive the railroads of a large amount of traffic and employment, by diversion of freight to a facility provided as a gift of the taxpayers, or (2) it will not divert sufficient traffic from the railroads to injure them, in which case it would be a useless waste of taxpayers' money.

The railway labor organizations have on many occasions publicly stated their opposition to the construction of the Seaway—during either peace or war. Nevertheless, the "big four" transportation brotherhoods in New York State have endorsed Mr. Bennett's candidacy and are organizing their own campaign in his behalf. This will not be the first time that a frank and open enemy to their means of livelihood has secured the endorsement of the railway labor organizations. They will vote for politicians who they hope will help them by supporting measures to take money away from their employer, but they will not use their votes to help their employer stay in business, so he will have some money to be deprived of.

Railroads Must Have Equipment

Rail transportation approaching critical stage, Pelley and Eastman declare—Shippers recommend Army-Navy "E" for railroads

THAT railroad transportation is approaching a critical stage wherein new locomotives and cars must be furnished if the railroads are to handle the peak traffic expected in the coming months was indicated by John J. Pelley, president of the Association of American Railroads, and Joseph B. Eastman, director of the Office of Defense Transportation, at the annual meeting of the National Association of Shippers Advisory Boards at Chicago on October 16. "The railroads are close to the bottom of the barrel in their efforts to increase utilization of their present equipment, particularly their motive power, and there is no further margin left in the reserves represented by unserviceable and surplus equipment," Mr. Pelley warned. "When it comes to taking in slack, the shippers and railroads have done so well that we are pretty close to the end of the rope and there is a clear and definite need for new locomotives and new freight cars," Mr. Eastman said.

George H. Shafer

Three days previously—on October 13 at Boston, Mass., Warren Kendall, chairman of the Car Service Division, A. A. R., gave much the same warning in an address to the New England Railroad Club.

President Alvin W. Vogtle, manager of traffic and sales of the De Bardelleban Coal Corp., presided over the meeting, which was attended by several hundred shippers and representatives of the railroads. Officers elected for the ensuing year are as follows: President, George H. Shafer, general traffic manager of the Weyerhauser Sales Company, St. Paul, Minn.; first vice-president, W. H. Day, manager of the Transportation department of the Boston Chamber of Commerce; second vice-president, Carl Geisow, director of the traffic bureau of the St. Louis Chamber of Commerce; and general secretary, C. J. Goodyear, traffic manager of the Philadelphia & Reading Coal & Iron Co.

Reserves Drawn Upon to Limit, Says Pelley

"There is no further margin left in the reserves represented by unserviceable and surplus equipment," Mr. Pelley continued. "Those reserves, or reservoirs, have been drawn upon to the limit to handle the 1942 business. At the same time, the effective utilization of existing equipment has been greatly increased.

"Each locomotive in active service is handling 25 per cent more gross ton-miles this month than in October, 1939, and October, 1939, was not an ordinary month. That month represented the culmination of the sharp upward swing which began in the late spring of that year and resulted in new high records for railroad equipment utilization. So I am comparing peak against peak when I say that each locomotive must perform 25 per cent more work this month than in the corresponding peak month three years ago."

Mr. Pelley announced that the railroads have asked the proper government agencies for authority to obtain 80,000 new freight cars, approximately 900 new locomotives, 2,100,000 tons of new rails and adequate maintenance materials for the year ending October 1, 1943. "If that program is fulfilled," he added, "the country may look for a continuation of satisfactory railroad freight operating performance."

Explaining that in seeking authorization to build 900 new locomotives in the next 12 months the "railroads felt that they were asking for the least possible number consistent with estimates of increased traffic," Mr. Pelley said: "Even if that number of locomotives is authorized, built and placed in active service before next October, it will be necessary for each locomotive in active service to turn out 7 per cent more ton-miles of work in October, 1943, than in the current month."

According to Mr. Pelley, the freight car situation is quite similar. The box car situation has been relieved considerably by the effects of ODT Order No. 1, he said, and the railroads can probably meet box car requirements next year with only a small number of new cars for replacements. He described the open top and flat car situation as "serious," and stated that "the railroads may be unable to handle more ore, coal, coke and other products which take open cars unless they can get more cars of these types. Even if the railroads get 80,000 new freight cars next year, of which 76,500 should be open tops and flats, it will be necessary for each car to do about 6.5 per cent more work next October than in the present month if the railroads are to meet increased demands. Passenger traffic is going up faster than freight traffic. In the first seven months of 1942, for example, revenue ton-miles of freight ran 37 per cent ahead of the same months of 1941, while passenger-miles went up 57 per cent—and are still rising.

"To meet this rising demand, there will be no new passenger cars in 1943. The railroads will have to meet it as best they can with the cars they have. In doing so, they are finding that the public, understanding the situation and realizing that troop movements and other travel essential to the war come first, are trying to fit in their trips where they can so as to cause the least difficulty and inconvenience."

"It goes without saying," Mr. Eastman said, "that if we are to attain and maintain maximum utilization of

existing facilities, they must be kept in prime order and repair, and this is true, not only of the locomotive and cars, but also of the roadbed and track, including most emphatically the steel rails. I have so reported to the War Production Board. I sympathize with the position of the Board that the utmost possible work must be got from existing facilities and that the amount of work to be done must be brought within the lowest limits that are practicable and wise, but with the present and prospective demands upon the transportation facilities of the nation, and particularly upon the railroads, such efforts cannot remove the need for necessary replacements nor even the need for some degree of expansion. It is also clear, as I see it, that our carriers cannot properly be included in the category of civilian supplies, for there is nothing which is intimately and pervasively related to the entire war effort as transportation. The transportation industry has thus far held up its end in the war effort, notwithstanding the difficulties, in a wholly admirable way. We cannot afford to take undue chances with it for the future.

Need New Cars and Locomotives, Says Eastman

"The Shippers Advisory Boards have always been concerned primarily with railroad transportation, but I do not want to close this talk without some reference to the rubber-borne vehicles. More and more in the last 10 months I have been impressed with the extent to which our country is dependent upon those vehicles. They have become by far the greatest factor in the transportation of persons and a great factor in the transportation of property. It is no disparagement of the railroads to say that their splendid record in the present emergency was made possible by those vehicles—in two ways, first by carrying a great part of the load and, second, by relieving the railroads of the hauling of much of the local and intraterminal freight which particularly encumbers their operations. That is on the freight end and, of course, the buses have carried a much greater share of the load on the passenger end.

"The outlook for these vehicles is not cheerful. There is no present prospect of expansion and a certainty of contraction. The problem is to keep that contraction within the lowest possible limits, because it is of enormous importance from every point of view to maintain rubber-borne transportation to the utmost extent possible. Our efforts are being directed to that end. They will bring no pleasure to us or the operators, but it is a task which must be done and it requires the elimination of waste to the last degree. We shall need the fullest co-operation of the operators and of the shippers if the job is to be done right.

"The War Production Board has the extraordinarily difficult task of apportioning the limited stock of critical materials. The war demands have no limit. The Board must determine how far they shall be met. The maximum can be reached only by cutting all other uses to the minimum. That policy is being followed. The Board is profoundly convinced that to win the war this nation must make an all-out effort, which means that there can be no 'business as usual' and no living as usual. They realize that adequate and efficient transportation is essential, but they are emphatic in their demand that the need for new equipment and facilities be measured by the maximum possible utilization of the equipment and facilities that exist and the elimination of all unnecessary transportation.

"Despite the extraordinary difficulties which I have brought to your attention, the carriers have performed magnificently. They have done all that has been required and done it well. The record is everlastingly to their credit and to the credit of the shippers who have co-operated so unceasingly and so effectively from the very beginning. I think the Office of Defense Transportation has done its share, and the fact that the ton-miles of freight carried are now, in these days of what is usually the October peak, running more than 30 per cent ahead of last year while the cars loaded are running a little behind is, I think, ample evidence to that fact.

"No one knows for sure what the future will bring forth, but it is certain that the railroads are driving their cars and locomotives as they have never been driven before and that they have very little strength in reserve. The productive effort of the country has not reached its peak, and I have no reason to believe that the traffic volume has reached its peak, or will for some time to come. We know that the movement of troops, with all that they involve, will continue to increase. We know that the restrictions upon the private automobiles and the buses are bound to throw a new and heavy load upon railroad passenger service. We know that the truck situation will bring some further load to their freight service, and I fear that it may be heavy. But beyond all that, we can have no assurance whatever that the vicissitudes of war may not at any time cause further dislocations or create new and extraordinary difficulties which our carriers will have to overcome. Certainly we are in for a long and bitter struggle and there is no sounder policy than to be ready for the worst."

Committees Speed Up Release of Cars

The Car Efficiency committees of the Advisory Boards have materially reduced the time cars are held by shippers, according to Warren C. Kendall, chairman of the Car Service division of the Association of American Railroads and Arthur H. Schwietert, chairman of the Vigilance committee.

A. W. Vogtle

"As a further indication of the effective work which car efficiency committees are doing," Mr. Kendall said, "reference need only be made to the matter of detention to equipment as shown in the records which are being currently maintained. Over a period of a few recent months, reports indicate that the number of cars held by shippers 48 hours or longer has been reduced by 30 per cent and that better than 90 per cent of all cars are being released within the free time. The results of the efforts put forth by the perishable industry are most gratifying; refrigerator car detention, as measured by demurrage, has been reduced more than one-half in the short period of two or three months; in one large terminal the average payments per car so far this year for demurrage were 41 cents, as compared with $2.16 per car for the

corresponding period in 1941. All of these records reflect the intense interest which is being taken by the shipping public in promoting car efficiency."

"Cleaning of cars by shippers," Mr. Schwietert reported, "has also been on the docket of all vigilance committees. It has not, however, received the consideration that it should and in my opinion the time has come when this subject ought to be made the Number 1 subject on the docket of all committees.

"A recent survey made by some of the larger carriers indicates that for an individual carrier as many as 20,000 cars are handled over the cleaning tracks in one month. Photographs and reports on such cars show that they contain not only bracing material and other debris incident to the safe transportation of the commodity carried in such cars, but a great deal of foreign matter. Apparently some industries have used freight cars as a dumping place for rubbish taken from their own warehouses and shipping departments. Such practices are inconsistent with the effort being made to conserve equipment since it takes from three to five days for a car to be switched from an industry to the cleaning track and then reswitched to another industry for loading. In addition to the car-days wasted, added locomotive power is required. Assuming for one large carrier an average of 5,000 cars per week, we could save at least 10,000 car-days if we could avoid sending 50 per cent of the cars to the cleaning track."

May Have to Revamp Loading Methods

The shipper may, and doubtless will, have to revamp his previous ideas on what constitutes safe stowing of freight in carload shipments, according to C. H. Dietrich, executive vice-chairman of the Freight Claim division of the Association of American Railroads. "He may also find," Mr. Dietrich continued, "that the containers he has heretofore used successfully in loads of from thirty to forty thousand pounds are not adequate for loads of double that weight. Many shippers who have heretofore packed their product in tin are obliged to use glass packages and here again an entirely different procedure in their packaging of freight for safe transportation will be necessary.

"The transportation companies, in the loading of their less carload freight at stations, are finding that it is much different to load from 8,000 to 10,000 lb. of this character of freight safely in a car, as compared to the present necessity of loading from 20,000 to 30,000 lb. Here again additional supervision and additional equipment within the car will be necessary to carry out this program successfully.

"It may be that this increase in our individual carloads and the consequent saving of equipment will, to begin with, result in substantially more loss and damage but I am optimistic enough to believe that both the shippers and the railroads, particularly the latter, will quickly adapt themselves to these changed conditions and the lessons learned will, through the great economies accomplished by this conservation of equipment, offset many times over the loss and damage bills, particularly after the freight handling forces, and those responsible for supervising this work, become accustomed to this heavy loading and, in years to come, we will, perhaps, wonder why it took a war to inaugurate economies such as this."

Others addressing the meeting were, R. V. Fletcher, vice-president of the Association of American Railroads, who spoke on Pending Legislation; M. J. Gormley, executive assistant of the association, whose subject was co-operation; Col. A. B. Barber, manager of the Transportation and Communication department of the Chamber of Commerce of the United States who compared the ton-miles of transportation performed by the United States with that of Germany; Charles Donley, president of the Charles Donley Shipping Agency, who discussed dunnage; Mr. Shafer who spoke on the perfect shipping month campaign; and I. Monroe Johnson, commissioner of the Interstate Commerce Commission, whose subject was "Keep 'Em Moving."

Mr. Kendall in his New England Railroad Club speech recalled that average daily shortages amounting to as much as 170,000 cars occurred during and immediately following the last war, while there have been none this time—despite the fact that the carriers at the end of the present calendar year will have 400 locomotives and 30,000 freight cars *less* than the number they sought to obtain. He compared the equipment supply on September 1, 1942, with January 1, 1918, as follows: Freight cars then 2,264,019, now 1,737,109—decrease 23.3 per cent; locomotives—then 63,546, now (January 1, 1942) 41,759—decrease 34.3 per cent. Meantime ton-miles in the first 8 months of 1942 have been 67 per cent above the same 1918 period. In the 8 months following Pearl Harbor 6½ million army men were moved by rail, as against 1.9 million moved in the corresponding period in 1918 (and this 6½ million doesn't include service men on furlough).

Mr. Kendall pointed out that it takes 65 trains—about 1,350 passenger and freight cars—to move one infantry division of 15,000 men with their equipment; while an armored division calls for 75 trains of from 28 to 70 cars each. Passenger car ownership (by railroads only) has fallen from about 28,000 in 1920 to slightly more than 17,000 "for perfectly understandable reasons."

The speaker said that, as far as capacity is concerned, there has always seemed "to be one more trick to pull out of the bag"—but "there is positively a limit to what the present motive power can do."

In his opening remarks, Alvin Vogtle, the retiring president, also emphasized the carriers' equipment needs. Said he:

"The Advisory Boards have not pressed for new equipment of the railroads so long as there was any unused capacity in railroad plant. But with all the reserve of unused capacity now utilized, and with the tremendous wear and tear on railroad plant, the further increase in traffic as the war grows in magnitude can be met only with new cars, new locomotives, and sufficient rail and material replacement.

"It is now clear to all that the nation is being wholly geared to war and civilian production is being cut to the bone. Therefore, every rail movement will soon relate directly to the military effort or to maintenance of essential civilian economy. In short, the growing traffic will include little, if any, unessential movements, but will reflect almost wholly intensification of the war effort."

Resolutions

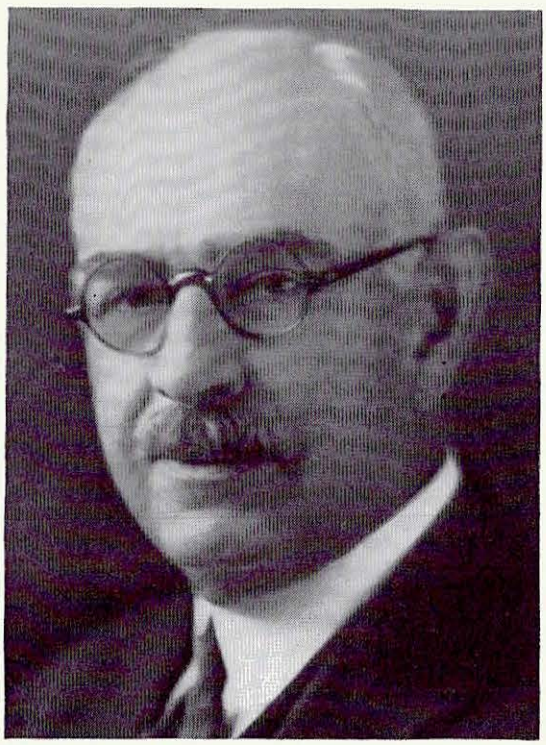
Several resolutions were passed by the association. One pledged a continuance and intensification of the co-operative measures which have been of assistance to the performance already rendered and recommended to the War Production Board reconsideration of the requirements of the railroads for new motive power, freight equipment, and maintenance materials.

Another recommended that the railroads should be officially commended by the government for their performance through the conferring of an Army-Navy "E" award upon them.

C. McD. Davis Elected President of the Atlantic Coast Line

Former executive vice-president is chosen to succeed George B. Elliott, who has headed the road since 1928

C. McD. Davis



George B. Elliott

AT a meeting of the directors of the Atlantic Coast Line in New York on October 15, George B. Elliott was relieved of his duties as president, at his own request, and C. McD. Davis, executive vice-president, was elected to the presidency. Mr. Elliott was elected chairman of the executive committee.

Mr. Davis was born in Catawba County, near Hickory, N. C., on July 1, 1879. He began his railway career with the old Wilmington & Weldon, parent company of the Atlantic Coast Line, on March 1, 1893, as messenger in the freight office at Wilmington, N. C. He later served in various clerical positions in the local freight office and in 1902 he became chief clerk in the traffic department. In January, 1906, Mr. Davis was appointed assistant general freight agent in charge of the rate and tariff bureau. He became general freight agent of the Atlantic Coast Line, lines South of Charleston, S. C., in November, 1911, and five years later was made general freight agent of the entire system, with headquarters in Wilmington.

During the period from May, 1918, to February, 1920, Mr. Davis was a member of the Southern Freight Traffic Committee, United States Railroad Administration, and from March to December, 1920, he was a member of the Southern Freight Rate Committee, Southern Carriers. In January, 1921, he was promoted to assistant freight traffic manager of the Atlantic Coast Line and in August, 1925, he was further advanced to the position of freight traffic manager. Mr. Davis was elevated to the vice-presidency in December, 1928, becoming executive vice-president of the road in May, 1940. At that time, he was also named vice-president of the Columbia, Newberry & Laurens. He has served as a director of the A. C. L. since 1934.

George B. Elliott is a native of Virginia, having been born in Norfolk on March 22, 1873. He attended Virginia Military Institute, where he studied engineering, and was graduated in 1892 with the degree of Civil Engineer. He then served for a time as assistant resident engineer for the Chesapeake & Ohio. He left this position to attend Harvard Law School, being graduated in 1896 with the degree of Bachelor of Laws. Thereupon he entered the service of the Atlantic Coast Line as special attorney and his entire railroad career has subsequently been with that road.

Mr. Elliott served as assistant general counsel from 1906 to 1916, when he was advanced to the position of general counsel. Two years later he was elected also a vice-president of the company, in addition to serving as general counsel. He was elected president of the road in April, 1928. In addition to his duties as president of the Atlantic Coast Line, Mr. Elliott has also held various executive positions on numerous subsidiary companies.

Business Research for Railroads

If the railroads can get adequate answers to some vital questions, such knowledge may largely protect their future—This analysis seeks to identify these questions and to indicate the means of determining the answers

By George Rugge

The following is the second and concluding part of a digest of a Master's dissertation which the author recently completed as an Alfred P. Sloan Fellow in advanced study in administration at Massachusetts Institute of Technology. Lieutenant Rugge is a member of the engineering staff of the Santa Fe, at present in military service with the Signal Corps, U. S. Army.

The part of this summary heretofore published (*Railway Age*, October 17, page 604) discussed the purposes of the type of analysis known as "business research" (as distinguished from the technological) and indicated the classes of problems with which it deals on the basis of their *location* with reference to the railroad organization, i. e., (1) internal (such, for instance, as traffic department studies); (2) general policy (for example, financing and credit); and (3) external (that is, influences such as general economic conditions, which a railroad cannot control, but upon which it needs information so that it may adapt itself to them).

Also dealt with in the earlier installment was the question of where the research department should be placed within the railroad organization—e. g., whether in the president's office or decentralized in the various departments.

Qualifications and training of research staff, and probable cost, are taken up in this concluding installment. Also, the possible subject matter of railway "business research" is classified departmentally and a list of practical questions is given in which railroad officers indicated their concern to the author—questions which can be answered only by research of the "business" type. The discussion is closed by the enumeration of 20 principles which the author's investigation leads him to believe must be observed for successful performance in this field of inquiry.

In this much-reduced digest, occasional variation from the author's exact wording has been found necessary. While effort has been made to adhere closely to the intent of the original manuscript, the expression here is the responsibility of the editor. It is intended to publish the entire manuscript of this study in book form. Those wishing to purchase copies may address: Director, Sponsored Fellowship Program, Mass. Institute of Technology, Boston.

THE selection of the staff of a business research group can be done by the use of established personnel principles. Who is to have the responsibility for the selection is the first decision that must be made. In the centralized group, this naturally rests with the director—along with suggestions from other officers. With the departmental type, the department officers would select the men.

If the centralized type of organization is used, a group of twelve to twenty men seems to be the normal size for most of the important carriers. This group should be representative of the important departments of the railroad—with probably the most emphasis placed on engineers and commercial analysts.

For the departmental organization, it will probably be found advisable to have a headquarters group varying from two to six men, depending on the growth of research in the various departments. Included in this group will probably be an economist, a statistician and a report editor. The men in the departmental groups will vary according to the attitude of the officers of the department, the degree to which the department is understaffed, the department appropriation and the relative importance of technical and economic problems. These departmental groups can grow as the need is acknowledged by the departmental officers.

For the committee system of research, a small "headquarters unit" similar to the departmental unit is advisable. The committee itself can be of any size and can consist of various types of men in accordance with the nature of the project.

Education or Experience—Which Comes First?

A third consideration in selection is the standard of qualifications required. To a "railroader" the first essential of any employee is actual railroad experience. In the research groups surveyed, this was considered an essential qualification in over 75 per cent of the cases. Many railroad officers felt that the minimum railroad experience needed was about five years. Some officers believe that a few men should be brought in from the outside to keep the research from going stale. This was proved to be a good idea in other industries.

In most phases of railroading, education has been considered secondary to experience. But for a research group, education is of primary importance; first, because research tends to be an activity of youth; and, second, because education is only a means of concentrating experience.

In a large organization it is difficult to know the abilities of the various employees unless a well designed rating system is used. Some railroads now have well developed merit-rating systems for several classes of their employees. When the modern employee-rating system is in use, the selection of research men from the company personnel is greatly simplified.

A company cannot train men to be research workers; the most it can do it to select the right men and provide them with the tools and the opportunity to do the job. However, a company might give a man who has demonstrated research capacity an opportunity to study

the modern techniques of research at some university. A man should have developed a "research mind" long before he is assigned to the research department of a railroad. Research ability is a faculty that men possess, and is not something that will result from a training program applied to men without this faculty.

In recent years there has been some discussion of using a research department as a training school for railway supervisors. A broad training program is a desirable adjunct to a research program in order that men of exceptional research ability may thus be selected from the mass of employees, but an attempt to have the research department train men will result only in training men and not in research. It is not denied that personnel formerly engaged in business research on some railroads have made impressive records of accomplishment in supervisory work. The success of these men does not necessarily indicate the training value of business research, but rather that superior men had been chosen initially for research work.

In Judge Fletcher's Opinion

The vice-president and general counsel of the Association of American Railroads, R. V. Fletcher, has the following to say of Mr. Rugge's study of "business research," as applied to railroads:

"I have read an advance copy of Mr. George Rugge's analysis of business research. It is a very interesting work indeed. On the whole, I think it is a profitable examination of a subject of the greatest practical importance to the railroad industry. Mr. Rugge has been careful to see that his material comes from authoritative sources and his general recommendations are helpful."

How Much Does It Cost?

The exact cost figures of business research activity are difficult to evaluate because of such variable factors as size of the railroad, type of traffic, gross revenues, territory served, financial status and competitive position of the company, and the purpose for which the research is undertaken. Business research expenditures by six representative large roads contacted were found to vary from $52,000 to $200,000 per annum.

Kinds of Studies Actually Being Made

Railway business research problems were classified earlier in this discussion on a basis of their relationship to the company—as *external, general policy* and *internal.* Another classification of these problems may be made according to the functional division of management, viz.: A—Problems of top management which are interdepartmental and involve questions of broad policy; B—problems of the company's revenue which concern the traffic department; C—problems concerning the operating departments (including mechanical, engineering and transportation); D—problems of the accounting and other departments. To illustrate the wide range of representative research studies being conducted by various railroads, a summary is given of the types of projects that have been studied by railway research groups.

A—Problems of Top Management

1. Measurement of economic forces, predictions of changes in these forces, and application of interpretations to everyday business problems.
2. Forecasting for as much as five years ahead.
3. Reviewing capital expenditures.
4. Investigating taxation.
5. Investment of reserves.
6. Reorganization studies.
7. Analysis of the managerial policies of subsidiary companies.
8. Competition and co-ordination studies—
   (a) Air freight study,
   (b) Motor transport study.
9. Expansion of transport facilities into new areas, taking into consideration what kind of transport is most economical for the job.
10. The contributions of various kinds of service to the income of the railroad.
11. Personnel selection, training, education, and morale.
12. Public relations studies—
   (a) Checking correctness of information before it is used in an article or address,
   (b) Finding out what people think is wrong with the service in a given territory.
13. Line abandonments.
14. Segregation studies.

B—Problems of the Traffic Department

1. Traffic development surveys, both agricultural and industrial, to promote new industries.
2. The transportation needs of an industry when consideration is given raw material, conversion, distribution and market factors.
3. Analysis of industries and communities along a particular line which is declining in traffic importance, with recommendations on their rehabilitation.
4. Commodity surveys—an analysis of traffic-flow trends, rates and services of important freight commodities. One company is making a 25-year analysis of its major traffic commodities.
5. Detailed traffic and market surveys of some sections of the railroad. Percentage of the total traffic received by each type of transport agency with recommendations of methods which will increase the railroad's revenue from that section.
6. Causes of loss of l. c. l. tonnage with recommendations as to rates, services, and policies which may be taken to recover this traffic.
7. Causes of all types of revenue losses with recommendations for offsetting them.
8. Do shippers send their freight on the same lines that offer the good passenger service?
9. Advertising and development of better selling labels and slogans for all phases of the railroad's service.
10. Analysis of sales methods—considering training programs, sales incentives, and more efficient sales control.

C—Problems of the Operating Department

1. Economics of repairs and renewals.
2. Economics of train operation.
3. Economics of realinement.
4. Economics of motive power selection.
5. Fuel and power economy.
6. Equipment loading. For example, should a railroad concentrate on highspeed equipment with maximum seat load?
7. Equipment and service studies undertaken to de-

velop the economic possibilities of improved equipment and service.

8. Pooling train services.

9. Joint operation of facilities.

D—Problems of the Accounting, Legal, and other Departments

1. Retirement studies.

2. Purchasing and inventories.

3. State and federal legislation affecting company.

4. Machine accounting methods and photographic recording of records.

5. Methods of consolidating economic data.

Questions Railroad Officers Want Answered

Besides bringing together the problems which have been studied by railway business research groups, an attempt was made to find out what problems the officers felt should be studied in the future. These results are presented below:

(i)—Problems of the Industry

1. Methods of maintaining the flow of investment funds into the railroads.

2. Analysis of international trade. The extent to which the United States participates in the post war world reconstruction will help to determine the importance of this problem.

3. Problems of labor strategy.

4. Which freight rates are fair and remunerative, which are excessively high, which are inadequate as measured by prices, transportation costs, markets, and competitive requirements?

(ii)—Problems of Top Management

1. Methods of keeping informed of economic changes which may affect the railroad.

2. Analysis of long-term outlook for the company and its competitors in the territory, with recommendations for long-term policies.

3. Company investment policy in air and highway transport.

4. Policies of control for air and highway subsidiaries.

5. Keeping informed on government planning and regulation.

6. Long-term budget and financial planning.

7. Methods of interchange and joint rates with other forms of transport.

8. Consolidation possibilities (especially terminals).

9. Economic analysis of privately owned freight equipment.

10. Economic analysis of duplicate service and possibilities of joint operation.

11. Economic effects of line abandonments.

12. Studies in organization seeking a better definition of duties, a better means of developing a balanced age group of supervisors, a better means of selecting and training competent men, and the establishment of better lines of authority.

13. Effectiveness and contribution of certain divisions and departments to the company.

14. Broad studies in personnel problems.

15. Broad studies in public relations.

(iii)—Problems of the Traffic Department

1. Shifts in the nature and location of physical production.

2. Shifts in the materials used in phsical production.

3. Growth of industries geared to other forms of transport.

4. Study of the rate of growth or decline of various industries in a road's territory.

5. The effect of rate structures on the development of the company's territory.

6. Increased amount of detailed traffic surveys, including both originating and overhead traffic.

7. Detailed studies of competitive transport in an area, with means of keeping data and reports current.

8. Complete analysis of passenger service, with recommendations for future rate structures, schedules, service and promotional methods.

(iv)—Problems of the Operating Department

1. Depreciation and obsolescence studies on equipment and roadway.

2. Requirements for high speed freight service.

3. Equipment analysis as to production of revenue, attractiveness and economies of various designs.

These suggestions are only a small portion of the possibilities, but the class of problems that occur first in the minds of men today are usually their idea of the most important problems of tomorrow. The suggestions of where business research will be needed tomorrow in railway companies may indicate that *the problems of top management are going to be of relatively greater importance than they have been in the past.* There are business leaders outside the railroad industry who feel that the problems of top management are becoming relatively greater than the other problems of the business. This concept, along with the necessity for the railroad to regain and hold a substantial amount of business, may well point the way to concentrating business research in the top management area and the traffic area.

Five Phases to Business Analysis

There are five phases in the analysis of all business problems, viz.:

(1) Recognition and statement of the problem. The existence of the problem must be recognized. Then its limits must be defined clearly so that a definite plan of action may be stated covering the entire problem.

(2) An analytical study to determine the methods of approach to the problem; to determine its various phases and their relationship to the whole; also, to determine the sources, availability and means of collecting the relevant data.

(3) Determination and assembly of facts. The researcher must determine all of the facts that have any bearing on the problem even though they are relatively unimportant.

(4) The facts must be organized in a logical sequence so they can be weighed one against another. Then the meaning and significance of the various facts must be presented. The constructions of tables, charts, diagrams, and photographs will be of great aid in this work.

(5) Interpretation and conclusions. The conclusions should be made with an unbiased mind, free from influence of personal opinions, and drawn from the interpretation according to the elements of the problem.

The real value of a report often depends upon its form of presentation. The effectiveness of a report to an executive depends upon (a) type of analysis he can understand most clearly, and (b) the timing of the presentation to coincide with the need for the information. Simplicity and on-time performance are as important in research work as they are in the operation of trains.

There exists, in some, a growing realization that busi-

ness research can be effectively and profitably used as a tool of railway management. This tool would be particularly helpful in the period lying ahead when survival of the business enterprise may depend upon its ability to recognize and adjust itself rapidly to accelerated rates of change in economic conditions. Principles which are suggested for the successful organization and operation of railway business research, as disclosed by this survey, may be enumerated as follows:

1. A permanent research organization should not be started until there is an improvement in the strategic situation of the war.*

2. There is a consensus of opinion that the research director should be an assistant to the president or equivalent.

3. In choosing a research director, contact should be made with some of the leading industrial research directors to gain a first-hand knowledge of the type of man required.

4. It is probable that a director can be chosen from a railroad's own forces. There will be many war-time jobs on every railroad that will be essentially research jobs. By means of special assignments, many men can be tested.

The Prime Requirement—a Competent Director

5. The director is the critical part of any research organization. The structure of the organization is incidental compared to him.

6. In selecting research personnel, the chances of obtaining competent young men will be greater if the choice is made from college-trained men who have demonstrated that they are willing to grow up the hard way on the railroad.

7. A research program should be organized to use regular research personnel. It is not a sound idea to use the regular positions of the research department as training positions for executives, except in the exceptional cases where the men possess both the qualities of line executive and research men. However, every advantage should be taken of the training possibilities offered by a research unit when extra assistance is needed.

8. The business and technical research should be under a common director, and the business research should be the governor of the technological.

9. Business research should begin in those phases of the railroad where the external pressures are tending to produce the greatest instability.

10. Today the most important problems on a railroad requiring business research are probably those related to general management and to traffic. The operating problems require primarily technological research, and many of them which require business research are by their very nature problems of general management.

11. For a small railroad, the business research men will probably have to be concentrated in one central group to be most effective.

12. For a large railroad, the first step is to organize a headquarters group under the director, beginning with one or two men and expanding to five or six men. This group should contain an economist, one or two engineers with operating experience, and a statistician. This group should build up the basic economic data for the company and plan the direction of expansion for the company's research.

13. There should be an executive committee consisting of the president, research director, vice-president of traffic, vice-president of operation, and comptroller. The purpose of this committee would be to formulate the policy of all the company's research, and to help initiate major projects. The administrative control would still rest with the president and the research director.

14. After problems of general management, the traffic department should be considered. The research projects in this department are likely to be extensive and, in many cases, expensive. For most large railroads that do not now have organized research, the best approach to traffic research is to begin with small committees chosen by the traffic vice-president and the director of research. The members of these committees should be completely detached from other duties, and should spend their entire time on the specific research project for which they are chosen.

15. The traffic research group should include the railroad company's industrial and agricultural agents and their staffs.

16. The technical research of a railroad will be concentrated on the problems of the operating department, and will, therefore, probably be conducted by the operating department. This research may be centrally located in the department, or it may be decentralized in the various special sections of the department, such as engineering, mechanical, or transportation.

Some Centralized, Some Decentralized

17. The departments, other than the operating and traffic, have comparatively small staffs that are highly specialized, and employees are usually geographically concentrated. For these reasons, the business research problems of these departments can probably be handled most efficiently by a centralized research organization.

18. Care should be taken in establishing research groups in the departments. The executive research committee should make sure that the work is sufficient to occupy a well-rounded staff, and that the assigned duties are not jobs that are the regular responsibility of the line officers. If a well-rounded staff cannot be used, it will be better to turn the work over to the centralized group.

19. A new business research group at first should undertake only one project at a time, and the first projects should be those that promise early financial returns. It is very important to carry the first project through to conclusion as soon as possible.

20. Administrative responsibilities should not be given to the research organization.

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* This point was not elaborated by the author. All the evidence he presented persuades us that the earlier and more comprehensively this type of work is undertaken by the railroads, the better it will be. The war *might* come to an end very rapidly once a decidedly favorable turn occurs—in which case post-war problems might be upon the railroads before they could possibly be ready to cope with them. A vigorous and comprehensive beginning in this type of investigation does not necessitate adoption of a "permanent" plan, which, as the author suggests, might well be held in abeyance pending the accumulation of experience.—Editor.

Original Water Purifier—A century ago, says the Manchester Guardian, British railways employed a dependable and inexpensive method of purifying locomotive water supplies. A live eel was kept in the tender tank to eat the minute particles of animal and vegetable matter present in the water.

Brig. Gen. Carl R. Gray, Jr.

Military Rail Service Gets Set for Conflict*

Is expanding for duty in combat areas in any part of the world—Present goal is 42 operating battalions and 6 shop battalions

By Brig. Gen. Carl R. Gray, Jr.

General Manager, Military Railway Service, St. Paul, Minn.

THE Military Railway Service had its beginning many years ago. While steam railroads began to be developed about 1827, no war was fought in which railroads were utilized until 1861. At that time a vice-president of the Pennsylvania by the name of Thomas A. Scott became assistant secretary of war and he soon realized that there was a need for railroad services in that war. He, therefore, caused legislation to be passed in 1861 which marked the beginning of the Military Railway Service. D. C. McCallum, general superintendent of the Erie, was first commissioned a colonel and then a brigadier general ond commanded the Military Railway Service in the Civil war.

During that war, an order was published by the secretary of war which said in effect that commanders must have sufficient troops at destinations to unload military trains at once; that no one should disobey the orders of the superintendent or general manager of the railroad; and that any officer, regardless of rank, who did disobey these orders would be stricken from the rolls of the army and charged with insubordination. The idea of having sufficient troops on hand to unload a train at once is evidenced today in the order that no railroad shall furnish a car for the loading of any commodity unless it is known that it can be unloaded at destination at once. This present order had its conception in the order of the Military Railway Service in 1861. After the Civil war our army became very small. It was not until 1898 that we had any more trouble, and there was no need in the Spanish-American war for any Military Railway Service troops.

Organized for Combat Duty Anywhere

The basis for the formation of this service and the authority for its creation are contained in a federal statute which says, in effect, that when the American government puts an army in the field, it shall be the duty of the chief of engineers to form a military railway service for the purpose of operating and maintaining steam railroads in any theatre of operation. Now that means *any* theatre of operation. It means that in case of an expeditionary force, Military Railway Service troops will follow up the attacking infantry, artillery and other units with lines of communication and steam railroads.

It means, likewise, that in case this country is invaded, Military Railway Service troops will take over and operate those steam railroads now in existence that can be used to furnish supplies to the troops in that theatre of our operation. These lines will be immediately behind the fighting lines and in advance of the stations and large depots of all classes of supplies. We are, therefore, combat troops and every one of us has to pass a physical examination that will qualify him for unlimited field service.

Age limits for the Military Railway Service are higher than in the ground forces. We cannot commission men in the company grades of captain, first and second lieutenant who are in excess of 45 years of age. We can commission majors, lieutenant-colonels and colonels between 45 and 55. Forty-five years is the top for enlisted men without previous military experience, and 55 years with previous military service.

83,000 in Military Railway Service in 1918

During the first World war this Military Railway Service was formed by S. M. Felton, then president of the Chicago Great Western. In 1916, General Black, chief of engineers, called on Mr. Felton to provide troops and material to build and operate 150 miles of railroad. Shortly thereafter, the World war was upon us. In the meantime, one regiment had been formed and was in existence at the time of the declaration of war on April 7, 1917. Additional troops were organized, and one regiment, the Thirteenth, was formed with six companies from Chicago; one company of officers and men coming from each of six railroads.

General W. W. Atterbury, vice-president of the Pennsylvania, was chosen to command the entire Military Railway Service. By the time the armistice was signed, there were 69,000 men in France. In addition, there were 14,000 men being trained in America, so that the total number of enlisted and commissioned personnel incident to the Military Railway Service totalled about

* Abstracted from an address presented before the annual meeting of the Roadmasters' and Maintenance of Way Association at Chicago on Sept. 15.

83,000 officers and men, with approximately 87 per cent of them in France.

After the National Defense Act of 1916 was amended in 1922, a number of so-called reserve battalions of railway operating troops were formed. Many reserve officers stayed in the army, and from the reserve corps those who were railroad men were assigned to these various units.

There was general apathy all over the country with respect to military preparedness, and there was no plan for either active or inactive duty training. As a result, there was a gradual but steady decline in the number of units that had officers assigned to them.

With the rise of Hitler in the Third Reich, some far-seeing American army officers began to make plans for the eventuality they foresaw. One of these was John J. Kingman, whom many of you knew as district engineer in Milwaukee from 1926 to 1929. Four years ago he was selected as assistant chief of engineers on the military side, the office of chief of engineers being divided into two grand divisions—the construction division, which covers river and harbor work, and the military side, which covers all other engineering activities.

I had known General Kingman intimately for some years. He called me in one day and asked if I would help him organize the Military Railway Service, and placed me in command in February, 1939. He also called Col. C. D. Young, vice-president of the Pennsylvania, and we two became what might be termed "railroad consultants" to the chief of engineers, incident to the formation and organization of this branch of the service. Col. Young was assigned as chief of the branch in the chief's office and I as field commander.

Organized Along Railroad Lines

Starting with the major premise that, if there are railroads to be run, no one can do it as well as railroad men, this organization has been built. It is organized strictly along orthodox railroad organization lines, with one engineer headquarters railway, corresponding to and organized identically with an operating vice-president's office of any railroad; 10 railway grand division headquarters, corresponding in authority, organization and place to a general superintendent's office or a general manager's office; 42 railway operating battalions, which correspond identically to the division superintendent's organization; and 6 railway shop battalions, corresponding to a joint locomotive and car shop.

We have carried the railway titles into this organization along with the military rank. My title in this organization is general manager. The heads of departments in my headquarters are assistant general managers of transportation, engineering, equipment and stores. The title of the colonel commanding the railway grand division headquarters is general superintendent. The title of the commander of the operating battalion is division superintendent or superintendent, and his military grade is lieutenant-colonel, while the commander of the shop battalion is general shop superintendent, with the military rank of lieutenant-colonel.

You will see that, since there are 42 operating battalions and 10 grand division headquarters, we plan to have about four operating battalions under the command of a general superintendent. That is orthodox on American railroads. We believe that six shop battalions can take care of the back-shop work of the 42 battalions or 42 divisions. We will follow up the advancing, attacking forces with lines of communication and run the necessary supply trains forward with men, ammunition, food, clothing and material, and evacuate the wounded. With this in mind, we have planned that each of these divisions will handle between 70 and 120 miles of track, or that one of them will take over a big port and do the depot switching to the train yard from which the trains leave for the front.

Affiliated Method of Procuring Personnel

One of the things that looked hard and turned out to be easy was the providing of the commissioned personnel for these units. We called on Messrs. Pelley and Gormley of the Association of American Railroads and out of a series of conferences with them developed what is known as the "affiliated method of procurement." Under this plan, certain Class I roads agreed to furnish the commissioned personnel and as many of the selected enlisted personnel as they could from their own forces. In this way, we set up what was known originally as peace and war units—"peace" meaning that they would be formed during peace time. Other roads agreed to form war units and to secure the personnel after the declaration of war, if and when called upon to do so. The first 22 battalions, which are still known as peace units, were organized in 1940 and 1941 with complete personnel, including my headquarters, five of the ten railway grand divisions and three of the six railway shop battalions. We have since called on the railroads to activate additional battalions or to secure personnel for additional battalions as of July 14.

The next problem also looked insurmountable, but turned out not to be difficult. Obviously, we could assemble a group of 810 men in a camp and give them complete military training, but what bothered us was how we were going to develop them into a smoothly functioning division superintendent's organization, including maintenance of way, maintenance of equipment, transportation and stores.

Finally, we asked the railroad affiliates to take their units back on their own lines and train them themselves. Eventually, a contract was prepared, under which a carrier that has its own men as the officers of a battalion, agrees to take it back onto its property on a designated area for training, and to utilize its own civilian personnel as instructors of and demonstrators to the military personnel.

Liability for Possible Casualties

One of the things that was most bothersome about this plan for training was the question of liability. Suppose that we put a soldier engineer and a soldier fireman on the locomotive; and a soldier conductor and two soldier brakemen on the caboose. Suppose again that the train was wrecked while they were riding that engine or caboose, and one or more of them was killed. Obviously, they were soldiers and they lost their lives in the line of duty; but that might not satisfy the widow or the children of the victim. We saw opportunities for suit against the carrier on the basis of contributing to the death of the soldier. For this reason, the railroads were reluctant to assume that potential responsibility and liability.

The railroads were willing to train the battalions if a means of protecting them against serious liability could be found. The government representatives said, "It is not our intention that the railroads shall be placed under any expense in connection with this training of our troops, and we will agree to hold the railroads wholly free of any expense. If they will take out group catastrophe insurance, we will consider that the premiums

are a proper charge against the public funds and the government will assume the cost."

With that difficulty out of the way, the contracts were drawn, the troops were called into active service, and they are now back on the railroads for training. It is one of the most interesting experiments that any of you have ever seen. The first unit called was the 727th battalion from the Southern.

Number of Battalions Under Training

As of today, we have my headquarters, one railway grand division headquarters; the 711th, a non-affiliated unit, which has been building a military railroad between Camp Claiborne and Camp Polk, 50 miles long, and operating it; the 713th, the Santa Fe battalion, is training at Clovis, N. M.; the 719th, from the Southern Pacific lines in Texas, which was activated on September 1; the 727th, from the Southern, now at Hattiesburg, Miss., on the N. O. & N. E.; the 730th, the Pennsylvania battalion, now at Ft. Wayne, Ind.; the 753rd, railway shop battalion, from the Big Four shops at Indianapolis, Ind., which is training in an abandoned shop of the New York Central at Bucyrus, Ohio; and the 759th from the Missouri Pacific, also activated on September 1. Additional units will be called, possibly some very soon.

Organized labor has entered into this plan in the most co-operative, understanding way. We had an understanding that we will not displace a single man by reason of these 800 soldiers being on the property, and of course we have not.

So far as the 753rd battalion at Bucyrus is concerned, we took the shop as it was and where it was. Uncle Sam has enough locomotives, cars, cranes and other equipment in service to keep this unit busy. We are, therefore, in our training, working productively in repairing locomotives, cars and trains that belong in various depots, ordnance plants and elsewhere.

It is a marvelous demonstration of the co-operative attitude of officers and men and government agents and railroad executives in doing something that is so necessary and so vital, without the slightest difficulty or the slightest hesitation, and of a willingness to go "all out" in connection with it. Some day, when this incident is over and I make my report to the secretary of war, I fear that I shall be unable to acknowledge, as it should be acknowledged, the manner in which the American railroad industry responded to the call that was made upon it.

Railroad-Military Titles

We are organized exactly along lines that are familiar to maintenance of way men. To be specific, in my headquarters, the colonel in the engineering department is called an assistant general manager of engineering. Of the two lieutenant-colonels, one is the chief engineer of construction; the other the chief engineer of maintenance. There are two majors; one is chief maintenance engineer of bridges and buildings and the other is communications engineer. There are also two captains, one of whom is supervisor of work equipment, while the other is supervisor of water service; and one first lieutenant is assistant to the chief engineer.

In the engineering section of a railway grand division under the general superintendent, one lieutenant-colonel is called an engineer of track and structures; three captains are called respectively assistant engineer of structures, assistant engineer of track, and assistant engineer of signals. There is also a captain in this organization, who is a supervisor of water service; and there is a chemist.

In the division organization, under the superintendent, A company is the maintenance of way company. Its captain is the division engineer or general roadmaster, and one second lieutenant in the company headquarters is an assistant engineer maintenance of way.

This company is divided into two platoons; a bridge and building maintenance platoon, composed of three bridge sections; and a track maintenance platoon. The first platoon has a first lieutenant who is supervisor of bridges and buildings; while the second has a first lieutenant who is track supervisor, with six track maintenance sections, each containing a section foreman and 17 men.

There is no better organized business in the world than a railroad. There is no business in the world where the question of superior authority, and the carrying out of the orders of a superior officer, are understood and executed as well as on American railroads. There is no industry in the world that respects authority so much as the railroad industry. The only real difference between the soldier railroad man and the civilian railroad man is that we feed and clothe and take care of the former, while the latter does this for himself. For this reason, there is a headquarters and service detachment in each of these units, the sole job of which is to feed, clothe, mess, billet and transport the unit and its members.

C company of the battalion has 50 train crews; this being the size of the transportation company—50 conductors, 50 engineers, 50 firemen, and 100 brakemen. In the battalion at Clovis, N. M., there are 50 train crews with four years' minimum railroad experience for any of the 325 men, and ranging from that up to 18 years. There is no superintendent on any division of any American railroad today who has the experienced personnel that outfit has. Their deportment has been marvelous; their disease record has been nil. The 4,000 to 5,000 men who are on duty today and the 20,000 to 30,000 still to come, will be a credit to the greatest industry in the world, the American railroads.

In a prolonged discussion following his address, General Gray answered numerous questions from the floor, in which he first explained the ratings of non-commissioned officers in the Military Railway Service, the relation between age and grade as applied to officers, and the railway maintenance equipment furnished each battalion. In the latter regard, he spoke of the numerous gages of track on the railroads of the world, and told of the development of a motor car for the military railway units that can be used on track of any gage from 30 in. to 66 in.

Answering a question relative to the specific duties of a soldier locomotive engineer in training on a locomotive in regular train service, General Gray said that when the soldier engineer first gets in the locomotive he is like a pilot, but that as soon as the railroad's personnel, including the road's foreman of equipment, and the military unit's road foreman of equipment, certify him as a locomotive engineer, he actually handles the engine and the regular engineer retires to the back of the seat.

As to the procedure necessary for a man to get into the Military Railway Service, General Gray said that the officer personnel is provided by the chief operating officer of the railroad that has the affiliated unit, and that all of the officers, insofar as he can obtain them, come from his railroad and from jobs corresponding to those to which they will be assigned in the military units. If

(*Continued on page 654*)

Are Accident Reports Accurate?

I. C. C. looks into practices on six railroads and records some evidence of backwardness in disclosing full facts

WASHINGTON, D. C.

PRESCRIPTION of basic forms for compiling and maintaining "proper" records of all accidents to employees is recommended in a report on "Reliability of Railroad Employee Accident Statistics" which the Interstate Commerce Commission has received from its Bureau of Transport Economics and Statistics and Bureau of Safety. The report, dated October 12 and made public by the commission on October 16, is based on joint studies made by the two bureaus of reporting methods on six roads—Seaboard Air Line, Atlantic Coast Line, Delaware & Hudson, Delaware, Lackawanna & Western, Union Pacific and Chicago, Milwaukee, St. Paul & Pacific.

Generally, the report found nothing to criticize in the reporting methods of the D. & H., while it found a few "questionable cases" on the S. A. L. and "very few" failures to report correctly on the U. P. With respect to the Coast Line, Lackawanna, and Milwaukee, the investigators were quite critical.

Tribute to Union Pacific

Meanwhile the report took occasion to pay tribute to the U. P. for the safety record which has resulted in its showing consistently the lowest accident ratio of any large road. The U. P. files, it said, indicated that "the low casualty rate on this railroad is due to an energetic policy of accident prevention which pervaded the entire organization, from general officers to section laborers." If the U. P. figures for 1940 were used as a measure of what the employee accident ratio of Class I roads might theoretically have been in that year, "it appears that fatal accidents to employees would have been reduced by 298 and injuries reportable under the more-than-72-hour rule, by 10,659." In contrast to this U. P. policy, the report cites "the files of some other railroads, which indicated that the general officers and supervisors apparently expended much time and effort in finding some means by which a report of a particular accident could be avoided, the files being practically barren of anything related to accident prevention."

"An equal amount of effort devoted to bona fide accident prevention," the report went on, "might well have led to the saving of many lives, as well as avoidance of injuries. . . . It would be far better to achieve a bona fide safety record, backed by the knowledge that it had resulted in the saving of many lives and personal injuries to employees, than to engage in letter writing, conferences and pressure, in an endeavor to achieve a statistical record for safety, with the knowledge that lives and limbs had been sacrificed in the accidents which might have been prevented. The time to acquire a safety record is before an accident occurs, not afterwards."

Probe Followed Reports of Inaccurate Records

The investigation grew out of reports reaching the commission from time to time that its accident statistics relating to employees on duty "are not as accurate as should be the case, and that the records for safety established by some of the railroads were only paper records, actual safety and accident prevention not being truthfully reflected by the records." The commission requires reports of employee injuries sufficient to incapacitate the employee from performing his ordinary duties for more than three days in the aggregate during the 10 days immediately following the accident.

The fact that uniformity of reporting was not being obtained has been stressed in I. C. C. accident bulletins for several years, while "representatives of the Association of American Railroads have from time to time, given assurance that steps were being taken to secure uniformity." In spite of these and other measures, the evidences of the lack of uniformity persisted; and the commission decided upon the field investigation. The roads selected for the study were paired, the pairs being determined "with reference to similarity of geographical location, nature of traffic, character of employees, etc." Thus the pairing of the Seaboard and the Coast Line, the D. & H. and Lackawanna, and the U. P. and Milwaukee. Each of the pairs, the report points out, "showed great variation in their accident ratios though operating in the same geographical area and possessing similar traffic characteristics." The 1940 casualty rates for injuries to employees per million man-hours were: S. A. L., 7.44; A. C. L., 3.22; D. & H., 12.27; D. L. & W., 4.62; U. P., 2.15; C. M. St. P. & P., 4.33. The 1940 rate for all Class I roads was 6.49.

Seaboard Air Line

On the Seaboard, the investigators examined records relating to 1,111 accidents occurring in 1939. They found "indications that supervisory officers occasionally endeavored to prevent an accident from becoming a reportable casualty," while "it also appeared that employees themselves probably made some effort to promote the safety record, voluntarily or otherwise." However, as noted above, the report calls attention to the fact that the "questionable cases" totaled "but 17 out of 1,111 accidents."

Examples of S. A. L. accidents "in which exceptions might be taken to the procedures followed" included the case of a switchman who was struck on the face by a brake club while engaged in releasing a hand brake. The report quotes from a letter written by a claim agent to the general claims attorney, telling how the employee "with the bandage completely over his right eye" reported for duty the following day, but was not permitted to work. The employee, according to the letter, had a doctor's advice to remain off duty, but he nevertheless "wanted to go along with the yardmaster in holding his lost time down to three days, to keep it from being a reportable injury to the I. C. C."

In another case, a boilermaker helper with a foot fracture reported for work the following day and was kept on the payroll, the file turning up "a bill for a pair of crutches." The accident was shown as resulting in no lost time, and was not reported to the I. C. C. In the case of a switchman who wrenched his knee and lost

14 days, the superintendent's report said: "Inclined to believe trouble probably due former accident or other condition." The accident was not reported. Neither was that of a fireman who sustained a broken finger, the file there turning up a telegram telling of the fireman's feeling that he could "continue work on stoker fired engine," because "he is very anxious to avoid reportable injury."

Atlantic Coast Line

On the A. C. L., the files of the director of insurance and safety, who is in charge of safety work, "gave no clue as to the reasons why the accident ratio was so much below that of the Seaboard." So the inquiry was extended into the claim files. Information obtained there, as the report put it, indicated "the falsity of the figures reported by this railroad"; and also showed that "practically the entire organization, from the director of insurance and safety and other general officers and physicians down to the employees themselves, was thoroughly impregnated with the idea of avoiding accident reportability." The report proceeded to give a few specific examples "illustrating the policies, practices, and methods of this company."

There cited was the case of a section laborer who strained his back, but who was at work again before the reporting deadline despite the doctor's initial advice that the employee would be off duty for "several days" and that the accident would be reportable. The files turned up a letter wherein the general superintendent had told the director of insurance and safety that he was "delighted to see that this case is not reportable." He went on to credit the outcome to the "splendid and amicable work" of a general roadmaster. As an example of the "sickness" vs. "accident" idea, the report cited the case of a station employee whose foot was bruised when a mail sack fell on it. This accident was reported to the I. C. C., but the director of insurance and safety complained to the general superintendent that it was "another case that was 'poorly' handled all the way up the line." The complaint went on to suggest that the supervising officers and employees at the point involved "should be impressed with the fact that there is a tremendous difference between a case of 'sickness' and one of 'accident.'" If the occurrence had been at another point, the director of insurance and safety felt "satisfied our records would not have been burdened with an additional personal injury."

Indicating, as the report said, that "the decision of a doctor is not always regarded as final" was the case of a clerk who sustained a wrenched knee and was disabled for more than two weeks. There was "considerable correspondence" as to whether this case was one of "sickness" or "accident." It looked to the A. C. L. doctor like "a clear case of accident," but the director of insurance and safety wrote to the general superintendent, saying that he was "not at all satisfied that this case should be charged . . . as a personal injury regardless of what our doctors have to say about it." In another case, there was cited correspondence between a superintendent of transportation and the general superintendent, the former complaining that one of the company doctors "has never cooperated with us in matters of this kind," and citing the instance as evidence that his previous recommendation that the doctor be displaced "was fully justified."

Other A. C. L. cases included instances of employees returning to light duty within the three-day time limit; and of the laborer who "did his best," but was not in shape to work after a car foreman had called for him at his home and drove him to the shop. The laborer had sustained a fracture of his great toe, and the investigators found a letter wherein the medical director had told the law department that "there is a possibility that if this man had not returned to duty that he might have saved this toe." In another case, a conductor who stepped on a nail carried on despite the fact that the foot "pains me considerably." Because he thus "elected to aid us in maintaining the district record," the trainmaster expressed to the superintendent the hope that the conductor would be paid for two days that he took off.

Delaware & Hudson

The examination of Delaware & Hudson files, the report said, "indicated that they were meticulously accurate and they contained no indications of the use of any methods or practices designed to avoid accident reportability." The D. & H. injury rate from 1934 to 1940 varied from 10.27 to 13.34, being "by far the highest rate during that period of any of the six roads investigated."

On the Lackawanna, the investigators found "no regular forms or procedures for the filing of initial reports of injuries" with the claims attorney who is the accident reporting officer. Accidents were reported "from a variety of sources, superintendents, department heads, conductors, and occasionally from the injured persons themselves."

From the general files of the claims attorney, 582 relating to accidents to employees on duty were examined; but the files selected "were very incomplete."

"The condition of the files examined on this road," the report asserted, "was such as to lead to either or both the following conclusions: (1) The filing system and methods relating to employee injury claims on this road were extremely careless and slipshod or (2) all the data in such files were not furnished the commission's investigators. In those cases where the information in the files was sufficient to make possible any conclusions, it appeared that the number of accidents concerning which a report was improperly omitted was approximately 44 per cent of the total number which should have been reported.

Delaware, Lackawanna & Western

"Confirmation of the conservative character of this estimate may be found in the Delaware, Lackawanna & Western's own reports to this commission. The accident reports from the carriers are not due at the offices of the Interstate Commerce Commission until 30 days after the close of the calendar month. Consequently, the June report of the Lackawanna was not due until July 30. The commission's investigators appeared at the offices of this road on July 16, 1941, and completed their examination of the files on July 30. In May of 1940 the Lackawanna reported a total of 12 casualties and in June of the same year a total of 13. In May, 1941, casualties reported by this road were 12 but in June of the latter year they jumped to 33. Throughout the year 1940 the casualty rate per million man-hours on the Lackawanna ranged from a low of 3.46 in August, 1940, to 6.19 in January of that year. For the first five months of 1940 the lowest rate was 4.2 in May and the highest, 6.38 in April. From June, 1941, to December, 1941, the lowest rate shown for any month was 10.39 in August and the highest, 16.96 in November. This sudden increase in the casualty rate indicates that the management of this railway admits the incomplete-

ness of its reports before our investigation and promptly took steps to make them complete thereafter."

Three specific Lackawanna cases are listed to indicate the "more or less common abuse of the phrase 'no lost time'" which occurred "on this as well as other railroads in connection with accidents which had not been reported." The report explained that the expression, as commonly used, means that the employee involved "did not lose any pay," which is "far removed from the idea that he was 'performing fully and acceptably and without extra assistance all the duties customarily included in the regular assignment of the employee at the time of injury.'"

Union Pacific

Union Pacific 1939 records of 2,474 accidents to employees turned up only seven instances of failure to report accidents involving disabilities of more than three days; and two instances where such accidents were erroneously reported as less-than-three-day disabilities. If all of these nine were "clearly reportable cases," the report calculated that the U. P.'s 1939 casualty rate would have gone up from 2.43 to 2.68. In view of the "very few" failures to report, only a couple of specific instances were set out. One involved an injured conductor who reported for work within the three-day limit "in order to avoid a reportable injury," and then laid off "on account of the fact that he was suffering from a cold and flu at the time." The accident was reported as one involving a disability of less than 72 hours. Another case was that of a section laborer, who crushed his finger but returned the next morning to work as a flagman protecting a rail laying job.

Meanwhile, the U. P. files turned up a number of cases which "indicated that although local supervisors might have endeavored to avoid reportability, the general officers refused to approve such procedure." In that connection the report cited "an example of reporting an accident under circumstances which might well be emulated by certain other carriers." It was that of a U. P. carman who was injured, and on the following day left on an automobile trip. When he returned he reported that he had strained his side; and the doctor, though he found no swelling or discoloration, stated that if the man had been injured as claimed, he probably would be disabled for a week. On the basis of this information, the U. P. reporting officer—the general safety agent—wrote to the I. C. C., requesting that one reportable injury be added to the total for the month involved.

In view of the U. P.'s "substantially accurate reporting," and its "consistently low employee casualty ratio," the investigators thought it appropriate to call attention to "certain operating practices" of that road. Proceeding to do that, the report had this to say:

> The safety department is in charge of a general safety agent, with five safety agents under him, assigned to territories, or divisions, and devoting all their time to safety matters. It was estimated that about 60 per cent of the safety agents' time is spent in making observations and inspections. Forms are provided for the reporting of all exceptions taken by the safety agents to working conditions and practices, violations of rules, etc. Whenever possible these agents are required to handle corrections immediately, or where impracticable to do so, to "follow up" as soon as possible. They also are required to attend all investigations held in connection with the more serious accidents, and are instructed to make their own investigations, in the regular course of their itineraries, in the case of non-disability injuries and minor accidents.
>
> The continued maintenance of a low employee casualty ratio can be due only to a failure to comply with the law and the reporting rules of the commission, or to a bona fide policy in safety upon the part of management. On the Union Pacific the records and files in the 2,474 cases covered showed definitely that the latter factor was responsible for its low ratio. In the files examined there were scores of communications, not only to or from the general safety agent, but also the vice-president in charge of operations and the three general managers, relating to accidents and accident prevention. The error of relieving those in authority from the responsibility which necessarily goes with such authority has not been made on this railroad. This is indicated by the fact that subordinate officials and supervisors were held personally responsible for the safety of, and the safe performance of their duties by, employees under their supervision. The files record many instances in which supervisors had been dismissed from the service because of failure to exercise the necessary care to avoid accidents. When an accident occurred, an investigation was made for the purpose of determining its causes and fixing the responsibility therefor. At the same time steps also were taken to prevent a recurrence of a similar accident at other points on the system. . . .
>
> As part of this program this road publishes an Accident Prevention Bulletin each month, 25,000 copies of which are printed and distributed to its employees. Each bulletin contains an identification and a brief description of the details surrounding all reportable accidents which have occurred during the particular month, together with statements as to their causes and the methods by which they could have been avoided.

Chicago, Milwaukee, St. Paul & Pacific

The files of the Milwaukee, the report said, "were found to be almost completely lacking in analysis of the causes of accidents, or of discussions of or recommendations for preventing the occurrence of similar accidents." On the other hand, they "indicated that great emphasis was placed on ways and means of avoiding the reporting of accidents." In the latter connection there is cited a letter written by the assistant to the chief operating officer, who is in charge of safety work, to the secretary of the A. A. R. Safety Section. "I have," he wrote, "made it clear to every one on several occasions that our safety record is going to be an honest one, but at the same time I am going to take advantage of every technicality that I can in the I. C. C. requirements the same as is being done on other railroads." The investigation, the report noted, "was sufficiently comprehensive to produce a large volume of data supporting [this] announced intention."

The investigators on the Milwaukee frequently encountered two documents—a statement from the injured employee and a signed certificate of a foreman or timekeeper as to the amount of time lost following the injury. These documents "were so often misleading, if not in direct conflict with the balance of the file, as to make them unreliable." An example of the latter as well as of "official maneuvering in a vain effort to avoid a reportable accident" was found in the case of a signal helper who was injured when a motor car was derailed. The accident was reported by the superintendent as a case of no disability, but the assistant to the chief operating officer was notified by a police captain that the injured man had been used as a cook and tool man in camp cars during 10 days following the accident. Whereupon there was obtained from the signal helper a statement that he was "fully able to go out on the road and do the work as required by a helper, but it just so happened that the foreman wanted me to work in the tool car, unfortunately right after the accident occurred."

This statement was sent by the assistant to the chief operating officer to the general adjuster's office, but it also happened that a district adjuster had previously obtained from the injured employee a statement to the effect that he would be unable to resume his regular work for about a week. The accident was reported, and

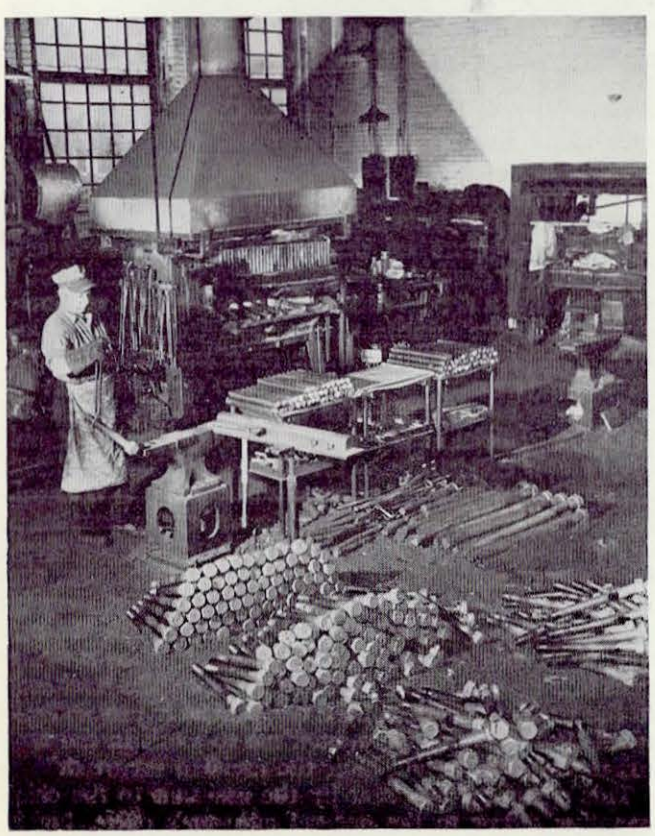
"subsequent information in the files indicated that the employee had a 30 per cent disability of the left arm."

Another case was characterized in the report as "still another effort to get an employee back to work, and one which it appears could have been attended by very serious results." It involved the injury sustained by a switchman when he fell backwards from a box car ladder. The attending physician, according to the report, wrote to the chief surgeon, sending along an X-ray picture and "pointing out that a lumbar vertebra appeared to have been wedged." The letter, written on February 5, 1940, also said that the attending physician had not said anything about the X-ray to the injured man who returned to work at the suggestion of an assistant superintendent. On February 14, 1940, the report went on, an assistant general adjuster wrote to a district adjuster, telling of an assistant general surgeon's finding that the films showed "a definite fracture of a lumbar vertebra," and of the latter's apprehension that the injured man's condition would be aggravated if he kept on working. This letter also said that the switchman did not know what the X-ray examination developed, and added "I do not believe that he should be told." Another letter written April 16, 1940, by the general adjuster to the assistant chief surgeon said among other things that the injured man "has not been advised of the seriousness of the injury." The accident was not reported.

Other Milwaukee cases were set out to show how injured employees were returned to light duty; instances of "the return of employees to duty before their injuries healed sufficiently, with the result that they again had to lay off"; cases wherein the employees signed statements that they laid off "for personal reasons"; and examples of "the possible use of a little pressure or influence on employees to induce them to return to work." Also, there was an example of "taking full advantage of the technicalities" in the case of an operator who was injured while assisting an aged man who had fallen at a switchstand. The accident was classified as "not a railway accident," the situation being appraised as one wherein the employee was "wilfully and improperly absent from his post of duty." The distance involved "was understood to have been about 50 feet," the report said.

Leading up to its recommendation that basic forms should be prescribed for compiling and maintaining records of accidents to employees, the report asserted that the investigation had shown that "adequate progress has not been made in accomplishing the result to be desired, which is that the commission's accident statistics shall present a true statement of total reportable employee casualties as defined in the rules in force." It added that the report had dealt primarily with non-fatal employee injuries, and "no evidence was found that fatal injuries are not being completely reported."

* * *



One of the Many Ways in Which the New Haven Salvages Scrap

Blacksmith Leonard Colangelo makes new blank bolts, for use on locomotives and cars, from bar stock salvaged from scrapped equipment

Military Rail Service Gets Set for War

(*Continued from page 650*)

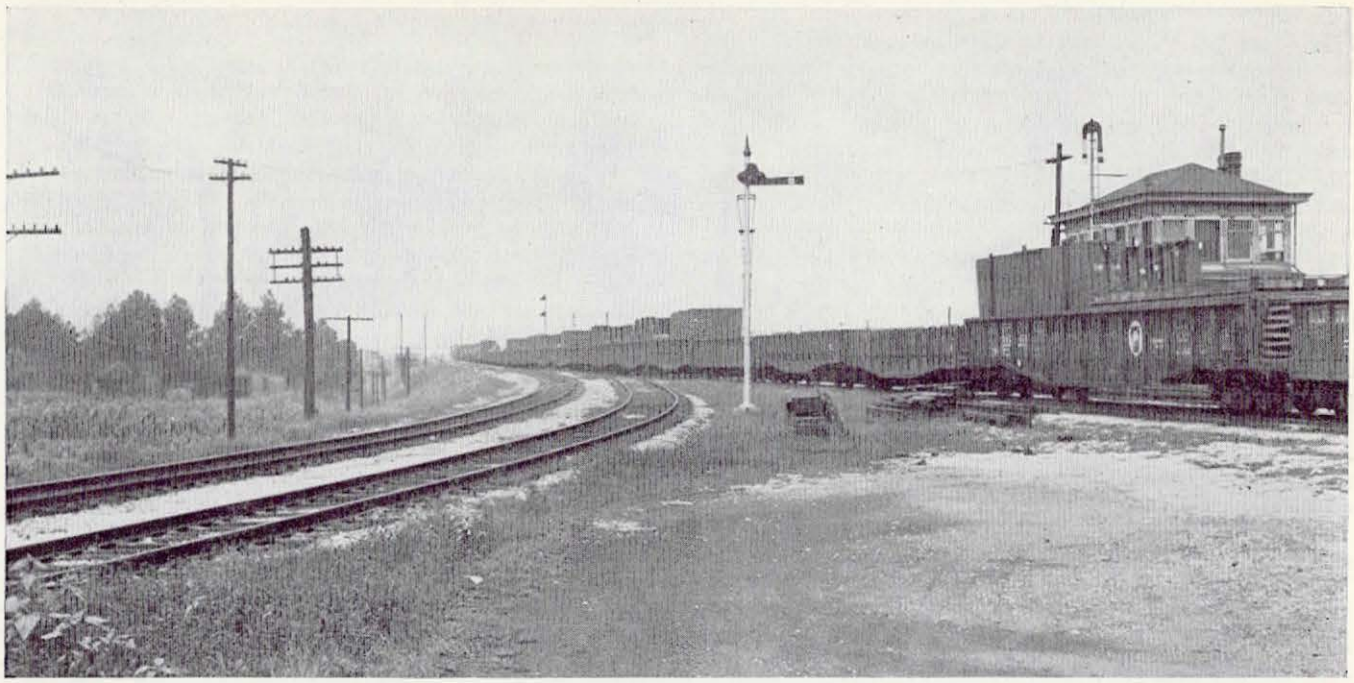
you hold a job on an American railroad that has an affiliated unit, he continued, you will be commissioned by virtue of your position on the railroad, with the recommendation of the chief operating officer of your road to the chief of engineers, provided that you can pass the physical examinations and are within age limits.

To meet the condition where small roads cannot furnish the entire officer personnel for a full unit, General Gray described what is known as the "affiliated pool" from which railway men on one road, upon entering the service, can be commissioned in the units affiliated with other roads where there is a deficiency in officer personnel in these units.

At another point in the discussion, General Gray made it clear that the Military Railway Service is not a railroad construction organization—that its function is to operate and maintain military lines and not to build them—all new line construction being in the hands of special construction troops of the Corps of Engineers. He also spoke of the military aspects of the training being given to the men in his organization and of the high degree of marksmanship being developed among them. Closing the discussion, he said:

"Our type of maintenance will be that for branch line track. The type of engine that we will use is a small Mikado, with not too much weight or too much tractive effort. The normal army train contains a small number of cars, to carry a fixed amount of freight of a certain kind, for a fixed number of troops—that is, a certain number of rounds of ammunition, a certain number of rations, and a certain number of other things—all standardized. We will run a larger number of smaller trains than is standard in American railroading.

"We are not concerned, as civilian railroad men are, with costs. The difference between the military engineer and the civilian engineer is that the civilian weighs costs with time, whereas we weigh only time. We are not interested in what the cost is. We must do the job regardless of cost. However, we can operate over branch line-type track. We will not spend money putting in a full ballast shoulder. Skeleton track or dirt-ballasted track, with the necessary shooflies, will very likely be the type of track we will try to maintain."



A Train of 131 *Cars for the Missouri-Kansas-Texas on the East Approach to the Merchants Bridge*

Why St. Louis Is No Bottleneck

The record the Terminal Railroad Association is maintaining in keeping heavy traffic moving and how the job is being done

TREMENDOUS increases in traffic through terminals are occurring now as they did in the last war, with the essential difference that in 1942, the terminals are being kept open and no congestions are permitted. An outstanding example of today's terminal operations is supplied by the Terminal Railroad Association of St. Louis.

The T. R. R. A. operates some 400 miles of trackage on both sides of the Mississippi river in the heavily industrialized area of St. Louis, Mo., East St. Louis, Ill., and the numerous factory towns surrounding them. It owns the Merchants bridge across the Mississippi river and leases the Eads bridge from the St. Louis Bridge Company. The T. R. R. A. is owned by 21 of the 25 lines entering St. Louis and handles the bulk of the freight tonnage passing through this gateway while all passenger trains entering or leaving St. Louis use the tracks of the T. R. R. A. into and out of the Union Station. This line is creating new operating records almost daily.

In 1938, the T. R. R. A. handled an average of 75,340 revenue carloads monthly on its line. By 1939, this had increased to 81,840 cars. It went up to 82,499 cars in 1940 and to 105,803 cars in 1941. The month of January, 1942, when 117,385 cars were handled, showed what the trend would be, and, by May, the figure had reached 148,503 cars and is expected to continue to increase. In addition to the loaded cars handled, thousands of empty cars are handled along with the loads. Cars are now being delivered in interchange to the T. R. R. A. daily by eastern lines, which are handled across the river through the terminal, and delivered to western lines within three hours after receipt. The average time on all cars handled in interchange by the T. R. R. A. is now under eight hours, as compared with an average of 12 hours only a few years ago.

During the last few years, the number of passenger trains handled has increased until it is now averaging 200 a day. All of these trains terminate or originate at St. Louis, as no passenger trains and only a few sleeping cars operate through that gateway. The T. R. R. A. handles all passenger trains in the terminal, but there is relatively little operating interference between its freight and passenger traffic. Generally speaking, wherever passenger and freight trains use the same right-of-way, the equivalent of a four-track railway is available for such operations.

Despite this record business, the T. R. R. A. is handling all business as it comes, including a large share of the all-rail oil movement. The St. Louis terminal is in such fluid condition that the T. R. R. A. is enabled to assist the trunk lines in numerous instances by so arranging its operations as to make deliveries of cars at their convenience. The St. Louis terminal and the railway which provides the bulk of the service have capacity for a materially increased traffic without congestion and with few delays.

A Complex and Important Link

The T. R. R. A. operates some 400 miles of trackage in St. Louis and the cities directly across the river in Illinois, serving as an extremely important link between the east and west bank lines. On the St. Louis side, a

line begins at Maplewood, at a junction with the St. Louis-San Francisco lines to the west and south. This line extends north to Overland, then east to the Mississippi river, then south, paralleling the river closely, to a junction with the Manufacturers Railway at Arsenal street, connecting with all the west side lines enroute. The T. R. R. A. operates across both the Eads bridge and the Merchants bridge and, on the east bank, a network of its lines extends from Falling Springs on the south to Granite City on the north, with connections with all the east bank lines, as shown on the accompanying map.

The complexity of the operations is indicated by the fact that the T. R. R. A. has one or more interchange points with each of the 25 other railways serving the St. Louis gateway. For example, deliveries are made to the Wabash and the Missouri Pacific at five different places each. While there are, of course, certain much-used interchange routes, at some time or other during the month the T. R. R. A. serves as a bridge line between all possible combinations of the 25 lines.

The T. R. R. A. operates 8 classification yards and 27 public delivery yards and serves more than 11 freight stations on its rails. It serves more than 300 industries having private industrial tracks into their plants. In addition, hundreds of others are served through the availability of its public delivery yards. Although the interchange of merchandise between east side and west side freight stations is largely handled by motor truck, the railway handles a very large volume of l. c. l. traffic originating at or destined to the St. Louis area.

The importance of the line to war effort is obvious insofar as interchange traffic is concerned. In addition, many important war production industries are located on the T. R. R. A.; also a tremendous engineer depot, the main U. S. Army medical supply depot and a small arms plant. For nearly a year, the latter has required the movement inbound of approximately 100 carloads of construction materials daily.

Good Supervision—Supported by 28 Diesels

Two major factors are contributing to this successful operation—intelligent supervision and the installation of 28 Diesel-electric switching locomotives. These locomotives were installed, beginning in 1940, following the passage of an unusually stringent anti-smoke ordinance in St. Louis, which had the effect of increasing the fuel bill of the T. R. R. A. to a point where Diesel-electrics were the only solution. It was the original plan to supplant steam power entirely on the west side operations, but the huge increase in traffic has made it necessary to continue much of this power in service. As a matter of fact, if the Diesel-electrics had not been purchased, the T. R. R. A. would today be facing a serious power shortage that would materially interfere with its operations. Instead, by efficient locomotive utilization, the railway has enough power for its present unusual needs and for the still heavier traffic which is in prospect.

The present list of Diesel-electrics is about evenly divided between the three largest builders. It includes 12 600-h.p. units, and 16 1,000-h.p. units, two of the latter being equipped with multiple controls for double-header operation, giving a total of 2,000-h.p. as needed in heavy transfer service. Five more 1,000-h.p. units have been on order since last fall, and delivery of three of them is expected before the fall peak traffic begins to move.

Upwards of 250 Switching Crews

The operations of the T. R. R. A. require an average of between 250 and 260 crews daily, all in switching service, as there are no road crews on this railway. About 40 of these crews are needed for passenger service only. Of these men, and of yard clerks and other employees as well, approximately 20 per cent are new men, from which fact it will be seen that supervision is essential when it is further considered that the operations take place over a wide area of terminal property.

Recognizing that supervision is a paramount need, the T. R. R. A. has kept well ahead by promoting men to supervisory positions as soon as the need was felt, thus solving the problem at the start, without waiting until a dangerous situation developed. The present operating supervisory organization consists of the following:

1 general superintendent
1 superintendent
2 assistant superintendents
5 trainmasters
2 general yardmasters
13 assistant general yardmasters
44 yardmasters

Since the first of the year, 1 additional trainmaster, 1 general yardmaster, 12 assistant general yardmasters and

Twin Diesel-Electrics Making Up a Train in Madison Yard of the T.R.R.A.

15 yardmasters have been added to give additional supervision.

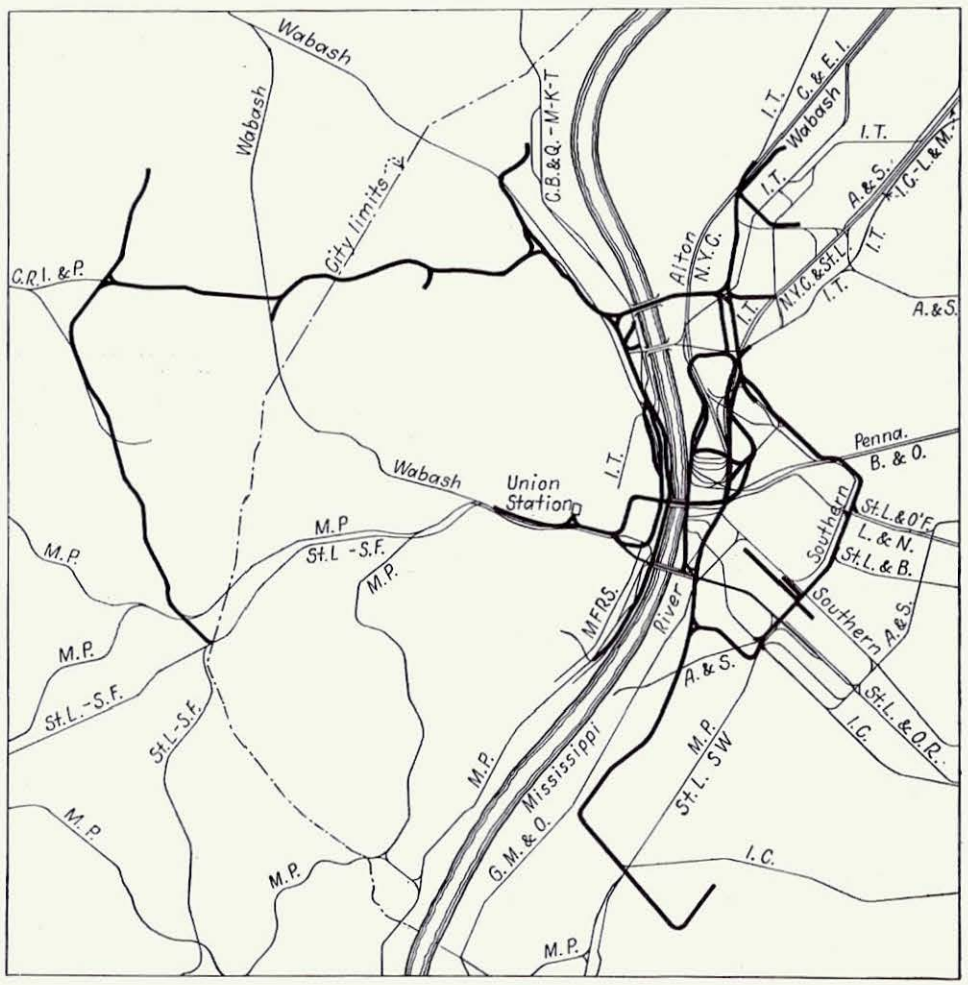
College Trained Switchmen

The T. R. R. A. recognizes in full the value of an old, experienced switchman, who has been "made" on the property, but it has also recognized the value of college-trained men. As a result, during the depression, a number of young college graduates were hired as switchmen. The relatively large percentage of these men who "stuck it out" now have from 5 to 10 years practical yard experience and they form an excellent reservoir from which many of the new supervisors are being selected.

With the aid of these new supervisors, operations at all the yards have been studied carefully to eliminate lost motion and to speed the movement of cars. The T. R. R. A. does a large amount of classification on the freight it handles, not only separating the cars as between the railways which are to receive them, but also does much classification of cars going into and coming out of the plants of industries within the terminal area. Such classification has also been studied and revised to meet present-day conditions. This is a continuing study and changes in switching methods are made daily in one or the other of the many yards, to meet the rapidly changing conditions.

The operations in Madison yard, in the important Venice-Madison-Granite City industrial district on the east side of the river, are typical. This classification yard has hitherto been assumed to have a theoretical capacity of 6,000 cars per day and even this is a fairly high figure for a flat-switching yard. Yet, to meet present needs, the operations at this yard have been stepped up until an average of 8,000 cars daily is handled there—with six lead engines on three shifts.

These activities on the part of the T. R. R. A., according to the railway's officers, have been materially assisted by the shippers and receivers in the area. The railway's customers have been loading and unloading cars promptly and, through co-operation in car handling, car loading and car ordering, have cut down the amount of industrial switching that would otherwise be necessary. It is estimated by the officers of the Car Service Division of the A. A. R., that shippers and receivers in the St. Louis area have increased the efficiency of car loading and car handling more than 50 per cent in the last year.


Wabash
Wabash
City limits
C.B.&Q.-M-K-T
C.R.I. &P.
I.T.
C. & E. I.
Wabash
I.T.
A. & S.
I.C.-L.&M.
Alton
N.Y.C.
N.Y.C. & St.L.
I.T.
A. & S.
Penna.
B. & O.
Wabash
Union Station
I.T.
M.P.
St.L.-S.F.
M.P.
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St.L.-S.F.
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Material Supplies Decline Further

Fourth consecutive decrease in deliveries—First decrease from previous year—Inventories also shrink

ALTHOUGH railroad traffic—measured by gross ton-miles of freight delivered—continues upward, the carriers are facing continued declines in the amounts of materials and supplies purchased for their maintenance and operation and are also beginning to report declines in the aggregate inventories of materials in stock, according to statistics of railway buying for the first seven months of the year.

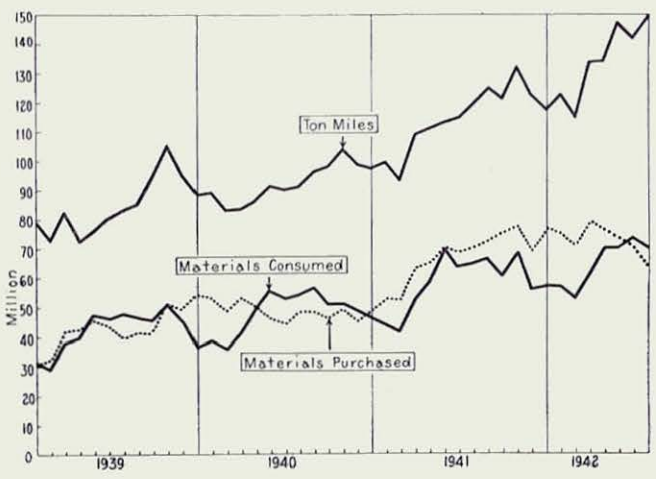
Class I railroads received 10 per cent less maintenance and repair materials in July of this year than in June, and the July totals reflected the fourth consecutive monthly decline in the materials received by the railroads. Deliveries in July, moreover, were 13 per cent less than in July, 1941, and reflected the first instance, since the war began, when the deliveries in any month fell below the corresponding deliveries in the previous year. Aggregate materials in stock also declined in July, being 2 per cent less on August 1 of this year, than on July 1, although they were still 45 per cent larger than on August 1, 1941.

Materials in Stock—Class I Railroads*

	Fuel (000)	Rail—New and S. H. (000)	Cross ties (000)	Stores stock (000)	Scrap (000)	Total (000)
Jan. 1, 1942.....	$40,040	$23,986	$48,426	$338,839	$ 8,808	$460,099
Feb. 1, 1942.....	40,427	22,705	60,944	346,458	10,941	481,475
Mar. 1, 1942....	40,198	23,886	64,290	360,946	10,489	499,809
Apr. 1, 1942....	41,372	23,635	66,837	377,799	9,947	519,590
May 1, 1942....	43,821	22,924	65,552	386,376	10,167	528,840
June 1, 1942....	44,574	23,562	62,424	392,441	10,689	533,690
July 1, 1942....	48,408	22,941	58,835	393,419	10,816	534,419
Aug. 1, 1942....	54,734	21,793	63,689	382,287	12,410	534,913
Aug. 1, 1941....	29,299	25,156	55,976	265,886	10,264	386,581
Aug. 1, 1940....	24,065	34,134	55,988	222,001	11,326	347,514
Aug. 1, 1939....	20,175	30,026	52,158	197,960	12,023	312,342

* Subject to revision.

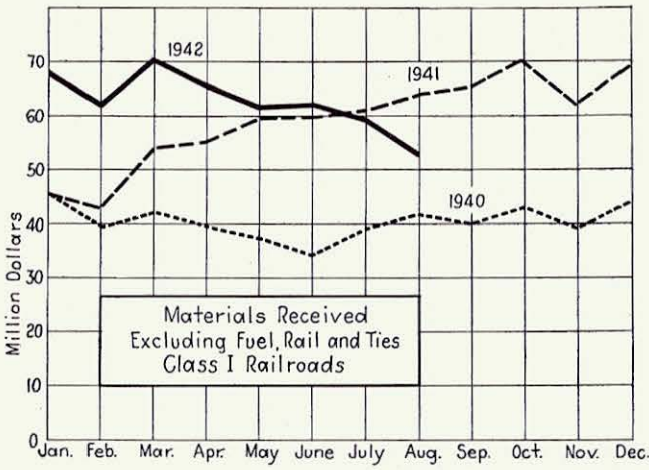
Materials and supplies, excluding fuel and new equipment, received by the railroads during July totaled $63,701,000, which was 9 per cent less than in June; 13 per cent less than in May; 16 per cent less than in April; and less by $5,808,000, or 20 per cent, than in March when aggregate deliveries were at their peak for the war period to date; and the July total fell 9 per cent short of the corresponding total in July, 1941. Materials and supplies, exclusive of rail and cross ties as well as fuel, delivered to the Class I railroads in July totaled $53,037,000, which was a decline of 10 per cent from



Trend of Materials Purchased and Consumed by Class 1 Railroads from Month to Month and Gross Ton Miles of Freight Carried

Materials Received—Seven Months, 1942

	Materials ex. Fuel 7 months 1942	Inc. over 7 Mo. 1941 %	Materials ex. Fuel Rail, Ties July 1942	Inc. over July 1941 %
A. C. & Y.	$ 271,709	16	$ 44,268	2
Alton	3,227,609	72	398,449	55
Alton & Sou.	191,361	5	17,018	–8
Ann Arbor	314,339	3	35,480	–1
A. T. & S. F.	19,084,527	–13	1,863,910	–32
A. B. & C.	391,817	20	44,796	2
A. C. L.	9,245,380	61	830,655	4
B. & O.	20,988,532	20	2,528,670	20
Bang. & Aroo.	550,607	23	63,869	73
Bing. & Gar.	233,485	188	3,163	43
B. & M.	4,737,112	20	633,200	7
Bur.-R. I.	32,922*	87	1,877†	23
Cam. & Ind.	69,461	–37	6,439	–51
C. of Ga.	1,709,968	–19	161,074	–37
C. of N. J.	4,269,610	14	609,313	31
Cent. Vt.	563,592	19	47,838	–14
Char. & W. Car.	370,920	–1	34,335	5
C. & O.	8,588,799	–8	904,033	..
C. & E. I.	1,800,832	8	187,796	9
C. & I. M.	566,340	6	48,780	16
C. & N. W.	10,266,329	8	1,231,230	–9
C. & W. Ind.	312,465*	–13	45,282†	–3
C. B. & Q.	12,965,531	31	1,263,321	–3
C. G. W.	1,834,016	18	127,798	–27
C. I. & L.	679,381	–18	91,020	4
C. R. I. & P.	9,815,895	20	1,073,333	3
C. St. P. M. & O.	1,818,296	5	176,461	–48
Clinch	749,366	12	84,803	–29
Colo. & Sou.	766,789	15	73,179	–17
C. & G.	216,121	113	25,395	46
D. & H.	3,408,808	27	361,460	5
D. L. & W.	4,291,914	7	492,807	–4
D. & R. G. W.	3,018,497*	–6	426,740†	2
Det. & Mack	74,567	7	10,630	100
D. & T. S. L.	180,002	19	10,358	7
D. T. & I.	474,316	35	66,580	47
D. M. & I. R.	1,718,473	14	140,818	–26
D. S. S. & A.	289,446	–14	11,207	–25
E. J. & E.	1,471,159	–1	111,055	–40
Erie	7,831,919	10	840,048	–25
F. E. C.	1,583,693	87	162,419	65
Ft. W. & D. C.	853,253	32	93,147	2
G. N.	13,693,249	12	1,220,270	–15
G. M. & O.	2,594,358	67	175,411	–7
I. C.	17,945,453	26	1,938,779	–1
Ill. Term.	771,016	35	67,836	–1
K. C. S.	.....	..	198,804	–12
K. C. Term.	424,038	3	53,739	–10
L. S. & Ish.	96,922	–35	8,422	–35
L. & Hud. R.	190,279	41	24,244	49
L. & N. E.	244,154	7	14,818	–48
L. V.	3,607,289	20	566,239	41
La. & Ark.	896,883	–9	93,470	–42
L. & N.	9,029,721	–8	950,375	–14
Me. Cent.	1,325,943	24	175,940	–22
M. & St. L.	1,012,185*	1	179,886†	22
M. St. P. & S. S. M.	2,922,287*	7	418,869†	5
Miss. Cent.	118,766	17	15,515	55
Mo. & Ark.	95,763	–19	6,181	–53
M-K-T	4,099,895	144	635,150	97
M. P.	15,684,087	10	1,830,687	6
Monongа	264,416	22	14,813	–29
Montour	153,078	21	17,337	2
N. C. & St. L.	2,014,840	25	196,677	–1
Nev. Nor.	92,372	–42	6,645	–73
N. Y. C.	46,933,925	12	5,140,422	–8
N. Y. C. & St. L.	3,884,852	32	362,692	..
N. Y. N. H. & H.	9,066,091	24	1,220,962	26
N. Y. O. & W.	532,743	60	84,799	42
N. P.	10,385,764	39	969,937	–2
N. W. P.	128,139	84	5,678	46
P. R. R. & L. I.	55,198,761	9	5,266,233	–45
P.-R. S. L.	455,597	22	22,234	–57
Peoria & Pekin	207,690	..	21,176	..
P. M.	2,971,397	1	290,295	..
Pitts. & Shaw	105,272	68	12,974	250
Pitts. Sh. & Nor.	90,042	–2	7,007	–56
Reading	9,091,957	34	705,155	–23
R. F. & P.	1,370,680	36	204,453	55



Month to Month Trend of Materials and Supplies Received by Class 1 Railroads, exclusive of Fuel, Rail and Ties. Represents the Deliveries of Maintenance and Repair Materials

	Materials ex. Fuel 7 months 1942	Inc. over 7 Mo. 1941 %	Materials ex. Fuel Rail, Ties July 1942	Inc. over July 1941 %
Rutland	279,490	6	33,666	–20
St. L.-S. F.	4,939,136	–17	639,220	2
St. L. S. W.	3,418,923	7	321,813	29
Seaboard	6,571,970*	4	1,044,755†	8
Southern	15,992,584	–1	1,778,970	–5
S. P.	20,302,514	49	2,215,123	23
S. P. & S.	1,571,375	15	171,572	52
Tenn. Cent.	551,275	103	40,845	7
Term. of St. L.	1,210,384	60	149,493	–4
T. & N. O.	4,737,300	27	403,829	–22
T. & P.	5,167,686	46	615,859	49
U. P.	28,095,556*	66	3,495,818†	–5
Utah	56,772	20	8,181	–1
Virginian	3,481,527	100	313,422	24
Wab	6,214,648	32	511,417	–16
W. M.	2,466,780	–26	291,760	–56
W. P.	2,896,493	59	290,000	56
W. & L. E.	1,686,628	–20	129,336	–30

* 6 Months. † June.

June; a decline of 14 per cent from May; a decline of 19 per cent from April; and a decline of 25 per cent from March; and the aggregate fell short of the total in July, 1941, by 14 per cent. The railroads received about the same amount of rail in July as in July, 1941,

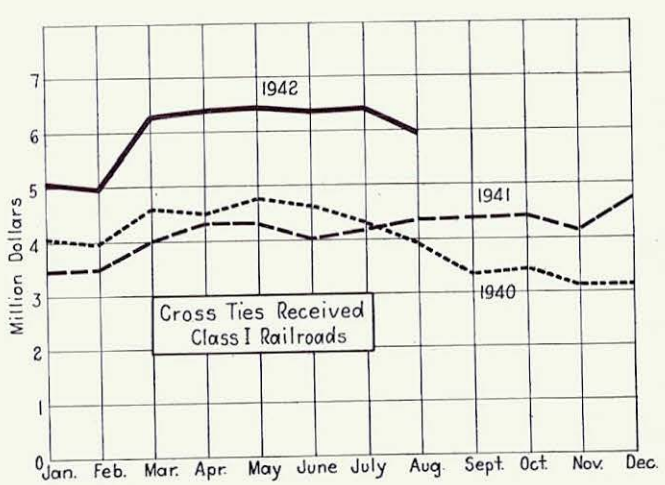
Materials and Supplies in Stock August 1, 1942

	Rail Aug. 1 1942	Cross Ties Aug. 1 1942	Other Material Ex. Fuel Aug. 1 1942	Inc. Over 1941 %
A. C. & Y.	$ 6,950	$ 53,641	$ 182,928	17
Alton	123,252	216,393	1,254,201	104
Alton & Sou	48,960	12,413	113,640	44
Ann Arbor	111	13,845	214,003	22
A. T. & S. F.	1,152,830	5,924,279	18,835,499	80
A. B. & C.	765*	66,183*	242,169*	..
A. C. L.	284,027	413,484	5,113,256	75
B. & O.	410,507	1,050,025	13,246,362	48
Bang. & Aroo.	91,538	66,308	704,523	10
Bing. & Gar.	34,005	26,129	46,648	75
B. & M.	167,012	724,162	3,389,524	28
Bur.-R. I.	459*	18,906*	34,351*	19
Cam. & Ind.	2,597	4,675	53,723	3
C. of Ga.	22,002	229,640	1,385,034	48
C. of N. J.	139,544	230,923	2,622,909	72
Cent. Vt.	92,311	80,560	496,149	27
Char. & W. Car.	7,608	30,462	231,490	16
C. & O.	46,095	714,996	5,423,192	..
C. & E. I.	23,549	147,533	1,321,216	83
C. & I. M.	11,181	86,966	547,409	31
C. & N. W.	656,910	1,457,212	7,790,389	28
C. & W. Ind.	30,911*	19,334*	328,096*	26
C. B. & Q.	621,050	2,903,681	7,737,786	92
C. G. W.	47,264	93,307	813,182	56
C. I. & L.	126,304	72,849	498,499	21
C. R. I. & P.	564,880	965,566	7,300,748	39
C. St. P. M. & O.	158,801	339,883	1,332,794	34
Clinch	36,195	62,087	464,995	32
Colo. & Sou.	34,302	75,574	196,236	–15
C. & G.	41,823	.....	144,425	35
D. & H.	264,721	253,810	2,756,711	45
D. L. & W.	236,457	309,255	2,737,691	70
D. & R. G. W.	328,812*	42,906*	3,967,772*	34
Det. & Mack.	40,847	13,907	144,605	12
D. & T. S. L.	5,174	10,865	144,254	21
D. T. & I.	69,019	116,090	591,741	46
D. M. & I. R.	152,856	230,456	1,376,242	45
D. S. S. & A.	46,990	43,849	218,111	33
E. J. & E.	142,985	180,360	1,323,941	36
Erie	468,656	842,325	4,873,123	56
F. E. C.	191,466	364,736	1,714,111	30
Ft. W. & D. C.	8,574	44,252	516,901	35
G. N.	673,597	1,608,236	10,619,343	50
G. M. & O.	61,771	319,972	1,513,657	35
I. C.	263,554	491,662	9,513,543	52
Ill. Term.	10,663	76,177	368,969	15
K. C. S.	281,134	542,595	1,366,016	75
K. C. Term.	11,213	49,099	216,979	19
L. S. & Ish.	4,535	17,296	262,586	3
L. & Hud. R.	10,501	10,218	135,187	87
L. & N. E.	19,772	29,404	411,251	22
L. V.	164,151	326,287	2,306,965	22
La. & Ark.	98,855	200,529	752,092	29
L. & N.	474,217	2,474,788	8,544,227	25
Me. Cent.	13,354	171,029	1,138,370	14
M. & St. L.	43,830*	120,741*	829,341*	34
M. St. P. & S. S. M.	218,910*	339,613*	2,091,795*	23
Miss. Cent.	9,089	13,271	74,890	18
Mo. & Ark.	4,888	4,295	47,515	2
M-K-T	172,520	526,492	2,337,304	52
M. P.	868,707	2,299,954	13,530,319	..
Monongа	10,271	8,345	290,437	44
Montour	8,621	9,296	192,631	25
N. C. & St. L.	67,841	515,472	1,932,332	22
Nev. Nor.	17,294	35,516	120,447	19
N. Y. C.	1,775,136	5,817,075	34,350,151	33
N. Y. C. & St. L.	56,451	338,479	2,460,183	..
N. Y. N. H. & H.	326,807	177,211	5,860,740	28
N. Y. O. & W.	12,495	79,955	442,597	25
N. & W.	405,249*	793,203*	10,038,874*	25
Nor. Sou.			609,522†	
N. P.	435,955	1,338,884	8,581,373	46
N. W. P.	21,475	39,253	89,034	55
Peoria & Pekin	10,438	33,719	177,081	..
P. M.	95,392	626,834	2,754,534	..
Pitts. & Shaw.	23,757	28,392	73,615	30
Pitts. Sh. & Nor.	924	612	79,963	39
Reading	132,958	392,821	6,969,139	65
R. F. & P.	.....	.....	1,390,291‡	27
Rutland	39,420	39,652	329,877	40
St. L.-S. F.	174,001	539,570	3,463,943	15
St. L. S. W.	163,217	226,955	2,713,767	38
Southern	472,613	1,157,466	8,421,556	25
S. P.-Pac. Sys.	742,884*	2,688,783*	13,740,446*	83
S. P. & S.	28,359	341,614	1,554,378	90
Tenn. Cent.	.....	23,590	318,285	46
Term. of St. L.	39,608	41,080	546,769	44
T. & N. O.	253,740	664,622	4,007,524	50
T. & P.	74,270	445,203	3,899,621	31
U. P.	2,009,949*	1,084,101*	36,601,429*	101
Utah	26,337	58,558	175,858	–7
Virginian	193,357	361,928	3,624,044	89
Wab	55,128	244,887	3,605,118	43
W. M.	18,275	418,971	1,481,040	18
W. P.	198,800	151,700	2,020,100	37
W. & L. E.	235,881	167,159	1,192,475	15

* July 1. † All materials including fuel. ‡ All materials excluding fuel.

but received about 42 per cent more cross ties and 17 per cent more fuel.

More materials were received by the railroads during the first seven months, however, than in an equal period



Cross Tie Purchases by Class I Railroads, January 1940 to August 1942

in either of the two previous years. During the first seven months of this year, Class I railroads received approximately $509,632,000 of materials and supplies, exclusive of fuel and equipment, which was about 15 per cent more than the total for the same period in 1941, and about 47 per cent more than the aggregate deliveries in the first seven months of 1940. The materials received for maintenance and operation, exclusive of rail and cross ties as well as fuel and equipment, during the first seven months, amounting to $439,876,000, were 16 per cent more material than were received in the first seven months of 1941, and about 57 per cent more than were received in the first seven months of 1940. During the same seven months, the railroads obtained about 18 per cent less rail than in either the first seven months of 1941 or 1940, but the deliveries of cross ties, amounting to $43,448,000 for the seven months, were approximately 43 per cent larger than the corresponding deliveries in 1941, and about 33 per cent over the deliveries in the first seven months of 1940—unadjusted for differences in prices.

Materials Received—Class I Railroads

	Fuel (100)	Rail (000)	Cross Ties (000)	Other Material (000)	Total (000)	Total less Fuel (000)
1940						
Jan.	$ 24,977	$ 3,529	$ 4,128	$ 45,593	$ 78,227	$ 53,250
Feb.	24,219	4,815	3,928	39,939	72,901	48,682
Mar.	21,880	6,043	4,634	42,655	75,212	53,332
Apr.	21,575	6,470	4,585	39,407	72,037	50,462
May	21,852	5,019	4,789	37,122	68,782	46,930
June	20,160	5,022	4,645	34,510	64,337	44,177
July	20,875	4,571	4,293	39,446	69,185	48,310
7 Mo.	$155,538	$35,469	$31,002	$278,672	$500,681	$345,143
1941						
Jan.	$ 27,261	$ 3,464	$ 3,472	$ 45,457	$ 79,654	$ 52,393
Feb.	27,901	5,297	3,514	43,467	80,179	52,278
Mar.	31,121	5,168	4,087	54,070	94,446	63,325
Apr.	19,203	4,857	4,365	55,444	83,869	64,666
May	25,550	6,196	4,369	59,492	95,607	70,057
June	27,338	4,868	4,071	59,682	95,959	68,621
July	29,700	4,697	4,192	61,117	99,706	70,006
7 Mo.	$188,074	$34,547	$28,070	$378,729	$629,420	$441,346
1942*						
Jan.	$ 32,408	$ 2,523	$ 5,054	$ 68,006	$107,991	$ 75,583
Feb.	31,560	3,132	4,994	62,251	101,937	70,377
Mar.	33,567	3,094	6,330	70,085	113,076	79,509
Apr.	34,755	4,785	6,374	65,464	111,378	76,623
May	34,075	5,458	6,366	61,813	107,712	73,637
June	34,853	4,612	6,369	59,219	105,053	70,200
July	34,712	4,704	5,961	53,036	98,413	63,701
7 Mo.	$235,930	$28,308	$41,448	$439,874	$745,560	$509,630

* Subject to revision.

About half of the Class I railroads reported smaller amounts of materials received for maintenance and repair in July of this year, than in July, 1941; and 17 railroads received less of this material during the first seven months than in the corresponding period of 1941.

On August 1, Class I railroads reported $534,913,000 of materials and supplies, including fuel, on hand. This was a peak inventory for the war period to date and was 38 per cent larger than that on August 1, 1941, and 71 per cent larger than on August 1, 1939—based on comparisons without adjustments for differences in prices. Total stocks on August 1, exclusive of fuel, rail, ties and scrap, amounting to $382,287,000, also reflected substantially larger stocks than in previous years—the total being 44 per cent larger than on August 1, 1940, and 95 per cent larger than on August 1, 1939. The inventory of this material on August 1 of this year, however, was less in volume by approximately $9,000,000, or 2.5 per cent, than the corresponding total on July 1 of this year, and reflected the first break in the upward trend of aggregate inventories since the beginning of the war.

The railroads had less rail in stock on August 1 than in the same month of any of the three previous years; while tie inventories, unadjusted for prices, were larger on August 1 by approximately 14 per cent than the corresponding inventory in either of the three previous years; and the fuel on hand August 1, amounting to approximately $55,000,000, was about twice as much as the railroads had on hand in the same month of the previous three years.

Why St. Louis Is No Bottleneck

(*Continued from page 657*)

In the 11 days, July 21 to July 31, inclusive, 10,694 loaded tank cars of oil were handled, with an average time on the T. R. R. A. of 3 hr. 45 min. During that period 12,324 empty tank cars were handled in an average time of 6 hr. For the first 11 days of August 11,077 cars of oil were handled in an average time of 3 hr. 45 min., and 11,694 empty tank cars passed over the T. R. R. A. in an average time of 5 hr. 51 min.

Oil Trains Through St. Louis Gateway

No. Cars	From	To	Time on T. R. R. A. Hours	Minutes
29	M. P.	Wabash	2	0
55	M. P.	N. Y. C. & St. L.	2	35
26	M. P.	Penna.	1	35
24	M. P.	Penna.	3	0
64	M. P.	Penna.	2	0
78	M. P.	Wabash	2	50
71	M. P.	Penna	2	30
33	M. P.	Wabash	2	45
68	M. P.	Wabash	2	30
59	G. M. & O.	N. Y. C. & St. L.	1	30
53	St. L.-S. F.	Penna.	1	40
28	St. L.-S. F.	N. Y. C. & St. L.	2	25
30	St. L.-S. F.	B. & O.	1	25
33	St. L.-S. F.	Penna.	1	30
35	St. L.-S. F.	N. Y. C. & St. L.	1	55
62	St. L.-S. F.	Penna.	1	15

This fast movement is made possible by main-tracking these cuts of loaded tank cars through the terminal. As the trains roll on in from the southwestern and southern lines, the T. R. R. A. has its switching operations set up in advance. Insofar as possible, the tank cars are not handled as individual units, but as train lots. As soon as a train arrives at the T. R. R. A. interchange, its cars are rapidly classified as to receiving railways. In a rapid operation such as this, there is no time to wait for more tonnage. Within half an hour after the cars are placed on the interchange, they are classified and rolling toward the receiving railways, whether in cuts of 25 or of 80 cars. In the movement of tank cars, speed is the essential consideration and each car is too valuable now to be permitted to stand around waiting for others to show up. Tank cars are kept moving fast through St. Louis.

The only way the high standard of performance on shipments of oil to the East has been accomplished is by keeping the tank cars rolling—and rolling fast—all the way; and back again. Arrangements are now being perfected so that the return movement of empty tank cars will, for the most part, be in solid trains or substantial blocks, which should result in a material reduction in switching at St. Louis and other terminals en route and further reduce the overall time in round trip movement.

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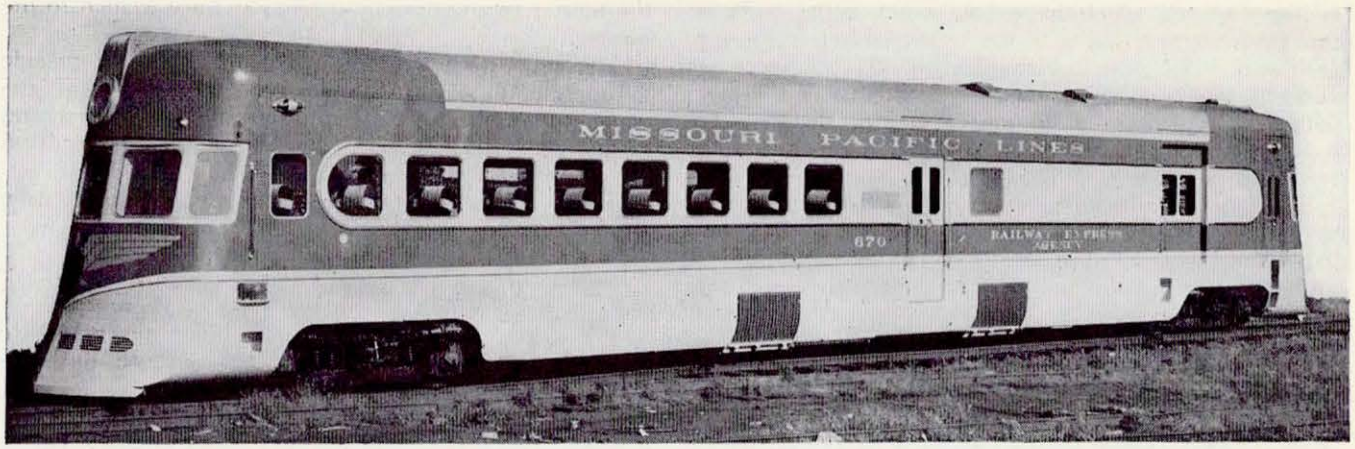
World's Slowest Train?—Scheduled to make a 110 mi. run in 13 hr. 10 min., the train between Corrientes and Mburucuya, Argentine, is usually several hours late, according to the British Whitaker's Almanac for 1942, which describes it as the world's slowest train. It operates over the Light Railway of Corrientes Province.



Missouri Pacific Motor Car with Power Plants Under the Floor

Motorailer Connecting Service for Missouri River "Eagles"

Car delivered to Missouri Pacific by American Car and Foundry Company carries baggage and seats 34 passengers—Power plants mounted under car

A DOUBLE-END Motorailer has recently been delivered to the Missouri Pacific by the American Car and Foundry Company. This car, which is designed to develop a maximum speed of 70 miles an hour, will operate between Lincoln, Neb., and Union where it will make connections with the Missouri River "Eagle" trains running into and out of Omaha, Neb. The run is 47.7 miles long in each direction, and the car will make two round trips per day. It will be maintained at the Lincoln enginehouse.

The car is arranged with a center vestibule, a baggage compartment at one end to carry 10,000 lb., and a passenger compartment at the other end seating thirty four. Interior finish and trim in the passenger compartment and the exterior color scheme both match the Eagle trains, the predominant colors being blue and gray. The passenger compartment is air conditioned.

Power is supplied by two 210-hp. underbody-mounted Waukesha spark-ignition oil engines through Twin Disc clutches and torque converters to geared drive axles, each engine driving at one truck. The engines are capable of accelerating the car to its top speed of 70 m. p. h. in 3.5 min. over a distance of 2.6 miles on level tangent track.

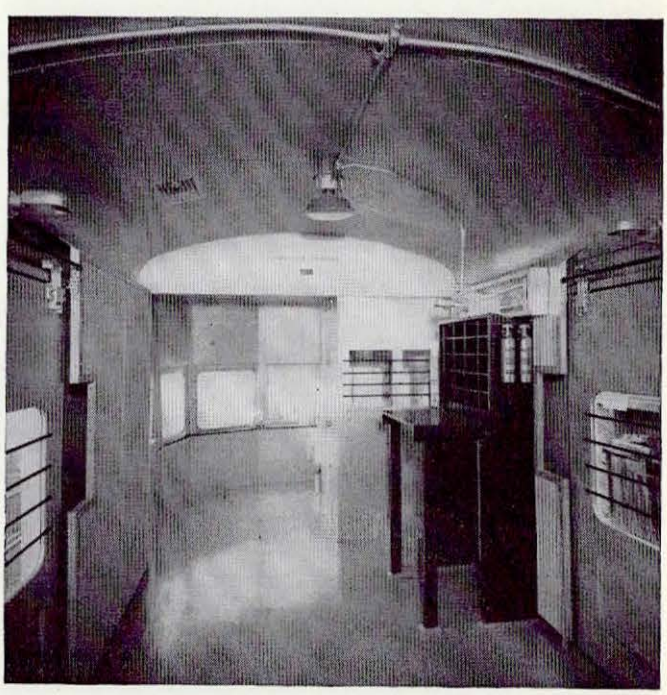
General Description

The vestibule is built with open-step wells. The lower step revolves through 90 deg. and carries a section of skirt so that in the closed, or up, position of the step the skirt line is continuous.

The seats have individual reclining backs and are of the revolving type as the car is not turned at the ends of runs.

The side sash in the passenger compartment are double glazed and dehydrated, and the inner glass are shatterproof. The sash in the ends of the car have single shatterproof glass.

The passenger compartment is lighted by safety center



In the Baggage Room—The Operator's Compartment Is at the Right Rear

ceiling fixtures which have blue night lights built in, and by individual lights in the safety basket racks over each seat. The floor is covered with carpet. There are venetian blinds at the windows. Drapes cover the piers between the windows. In the passageway between the baggage and passenger compartments is a G. E. water cooler.

The baggage-compartment floor is painted wood, with a small section of fish racks. The side lining is corrugated and the headlining flat. It is equipped with a desk and pigeon-hole case and is lighted by standard center and side-door fixtures.

The American Car and Foundry all-weather air-conditioning and heating equipment has a cooling capacity of 6½ tons. When heat is required the blower is turned over to push air across coils which are connected to the engine cooling-water system. Cooling air enters the car through Multi-Vent ceiling panels and is taken out through floor ducts in the side walls. During heating the air flow is reversed.

The operator's cabs at each end of the car are completely enclosed. The upper partition of the side, rear, and door of each cab is glass.

The Car Structure

The car frame is of welded construction with girder-type side frames. The side sills are carried down and under the vestibule step wells. Each side sill is made up of two rolled sections, one assembled in the underframe and the other in its side frame. The two members are riveted together in the final assembly of the body. The side plates are similarly divided between the roof and the side frame. The entire body structure is designed to withstand 100,000 lb. buffing load.

The end construction is all-welded. The main end posts extend through the floor and are secured to the end sill and to the draft sills. The latter extend through the bolster to an adjacent crosstie and are welded to the bolster.

The supports for the power plant extend from side sill to side sill and are arranged to give three-point suspension in rubber insulators to the combined engine and torque converter. Fabreeka insulates the supports from the side sills.

All framing members and sheathing are high-tensile steel.

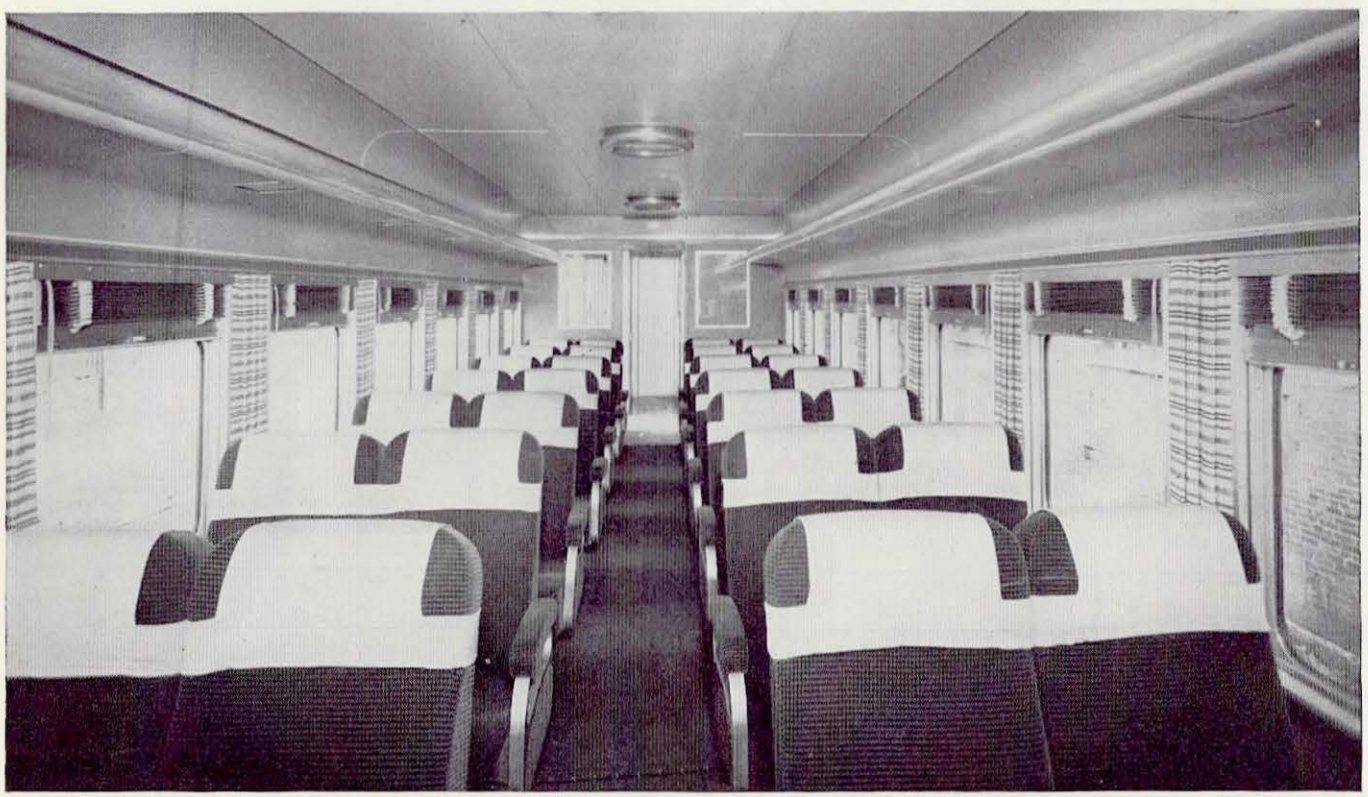
Power Plant and Transmission

The engines, which are mounted under the floor, are six-cylinder horizontal type with 6¼-in. bore and 6½-in. stroke, spark ignition. Fuel oil is injected solid by a Bosch pump. Compression is low, permitting lightweight moving parts. Each engine is water-cooled by a fan and water-tube radiators. Air is drawn through the radiators from the car side and exhausted under the floor.

The transmission is a hydraulic torque converter with a direct-drive feature. Hydraulic or direct drive is selected automatically by the master controller which initiates electro-pneumatic shifting of a Twin-Disc clutch. Hydraulic drive is used for starting, accelerating, and extremely heavy grade work. When in direct drive, a

Principal Dimensions and Weights of the Missouri Pacific Motorailer

Length overall, ft.-in.	75-0
Width over side sills, ft.-in.	9-6
Height, rail to top of carline, ft.-in.	12-6⅜
Height, rail to top of floor, ft.-in.	3-10
Light weight of body, lb.	80,900
Trucks, lb.	28,200
Total light weight, lb.	109,100
Water, fuel, oil, crew, etc., lb.	3,300
Total service weight, lb.	112,400
Revenue load, lb.	15,100
Total loaded weight, lb.	127,500
Seating capacity	34



Rotating Seats with Individual Reclining Backs Seat Thirty-four

free-wheeling unit built into the converter permits the engine to be cut to idling speed without dragging the car speed down.

Power from the converter drives one truck axle by means of a solid, universal-jointed propeller shaft. A pinion on the propeller shaft is constantly in mesh with two bevel gears in the axle housing. Forward or reverse motion of the car is obtained by locking one of the bevel gears to the axle by means of a splined clutch.

Accessory, control, and lighting power is supplied by two G. E. 20-kw., 125-volt generators, one driven by V-belts from each engine. Each engine also drives a small 12-volt generator to supply power for engine starting, the headlight, and battery charging.

Each engine is protected against over-speed, reverse operation, high water temperature, and low oil pressure by an automatic fuel shut-off. Graham-White sanders are installed.

Partial List of Equipment on the Missouri Pacific Motorailer

Truck frames	General Steel Castings Corp., Eddystone, Pa.
Journal bearings	The Timken Roller Bearing Co., Canton, Ohio
Clasp brakes	American Steel Foundries, Chicago
Snubbers	Houde Engineering Corp., Buffalo, N. Y.
Air brakes	Westinghouse Air Brake Co., Wilmerding, Pa.
Propeller shaft	Spicer Mfg. Corp., Toledo, Ohio
Engine	Waukesha Motor Co., Waukesha, Wis.
Torque converter	Twin Disc Clutch Co., Racine, Wis.
Exhaust snubber	Burgess Battery Co., Madison, Wis.
Battery	Electric Storage Battery Company, Philadelphia, Pa.
Radiators	Young Radiator Co., Racine, Wis.
Radiator shutters	Kysor Heater Co., Cadillac, Mich.
Sanders	Graham-White Sander Corp., Roanoke, Va.
Air conditioning	American Car and Foundry Company, New York
Multi-vent panels; headlight	Pyle-National Co., Chicago
Cooling fans	B. F. Sturtevant Co., Hyde Park, Boston, Mass.
Generators; generator regulators; air compressors; water coolers	General Electric Company, Schenectady, N. Y.
Sash	Adams & Westlake Co., Elkhart, Ind.
Venetian blinds	H. B. Dodge Company, Chicago
Seats	Coach & Car Equipment Co., Chicago
Light fixtures; basket racks	Safety Car Heating and Lighting Co., Inc., New York
Insulation	Gustin-Bacon Mfg. Co., Kansas City, Mo.
Horn	The Leslie Co., Lyndhurst, N. J.

Trucks and Brakes

The trucks are the General Steel Castings four-wheel drop-equalizer type with coil springs, Timken roller bearings and Houde snubbers to ease horizontal and vertical bolster motion and nosing of the truck. Insulating pads are installed at several points to deaden rail noise and shock. The A. S. F. clasp brakes are operated by truck-mounted cylinders, one on each side.

The brake system is the Westinghouse straight-air type SME, with deadman control and automatic sanding in emergency. The brake valve is self-lapping.

Communication . . .

Prepare to Cut Tonnage, Run More Trains in Winter

CLEVELAND, OHIO

TO THE EDITOR:

I have read your editorial on the difficulties that will confront the railroads this winter. Railroad officers are aware of these difficulties through past experience. The hope that we will have a mild winter must be discounted and preparations made to meet the worst—the best defense is to be ready for the worst.

We all know tonnage will have to be cut. We also expect tonnage to be handled will not decrease in proportion to the decrease in tonnage per train. Taking this into consideration, I have in mind a systematic study of tonnage to be moved and the number of additional trains to be run to take care of the expected tonnage to be handled. Tonnage rating should be cut so that trains will make the same time they are making now. This means more trains, all continuing to do as well if not better than they are now doing.

Speeding up movement is necessary, and in order to do this, tonnage rating to a certain extent must be ignored, weather conditions closely watched, and tonnage regulated for the entire trip instead of rating at the start.

No doubt, operating officers are giving due consideration to winter operations and are taking necessary measure to meet the situation. At the same time they are open for constructive suggestions, and now is the time to prepare and not wait until we are snowed under.

The allied nations were not prepared or this war could have been stopped before it started. Keep 'em rolling!

H. O. DUNKLE
General Agent, Erie

* * * *

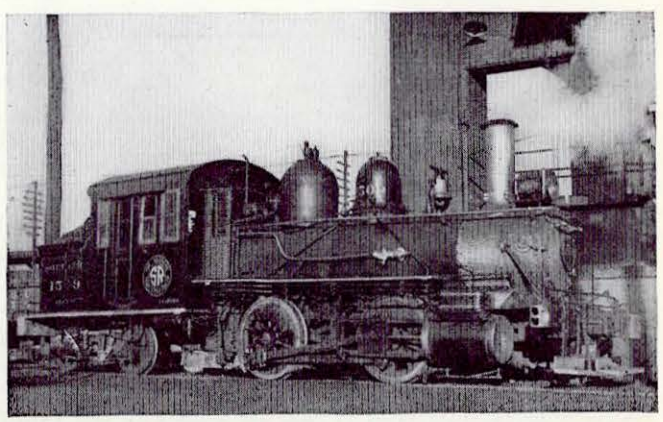


Photo by R. E. Prince, Jr., Norfolk, Va.

The Southern Operates a Shop Engine Called "Maud" at Atlanta, Ga. The Old Girl Was Built in 1880

Railroads-in-War News

New WPB Transport Division Organized

Receives authority to set up priorities for storage and transportation

A new Division of Stockpiling and Transportation has been created by the War Production Board, consolidating the staff and functions of that agency's former Transportation Committee and its Stockpile and Shipping Imports Branch, according to an announcement October 20 by A. I. Henderson, deputy director general for industry operations.

This division, Mr. Henderson states, "has the authority to work out systems of transportation priorities, if it becomes necessary to do so." Dr. W. Y. Elliott, former chief of the Stockpile and Shipping Imports Branch, will be director of the division, and A. F. Shafter, former chairman of the WPB Transportation Committee, will be director in charge of transportation and storage. The director in charge of stockpile and shipping in the new division will be Conant Brewer, who has been deputy chief in the Stockpile and Shipping Imports Branch.

The principal objectives of the new division, according to the WPB announcement, are these: (1) To make determinations with respect to transportation needs for the movement of commodities and materials essential to the war effort; (2) to establish schedules of priorities of movement in transportation of commodities and materials; (3) to insure through appropriate action that essential materials are imported for consumption and stockpiling; (4) to guide other government agencies with respect to the most effective use of warehouse facilities; and (5) to promote the safety of stocks of critical and strategic materials in storage.

Creation of the new division results in centralizing all functions and responsibilities of the WPB which relate to import priorities, stockpiling, storage and protection of supplies, and domestic transportation of commodities by rail, truck, waterway, or any other method. The division also has authority, Mr. Henderson points out, to advise the Office of Defense Transportation as to the "issuance of directives" concerning the relative importance of commodities for storage, and it is responsible for working with ODT "to secure greater efficiency in use of transportation facilities by recommending curtailment or elimination of unnecessary long hauls, uneconomical routing, cross hauls," and similar practices. "In the event of actual or anticipated acute transportation shortages, the division will recommend programs to appropriate government agencies for the curtailment or elimination of transportation for certain traffic considered unessential to the war effort."

Under the new set-up, the division will exercise the same control over imports and shipping priorities that the former Stockpile and Shipping Priorites Branch of the WPB exercised, and will have the same relationship as that branch to such agencies as the Board of Economic Warfare and the War Shipping Administration. In addition to its responsibility to cooperate with ODT in establishing storage priorities, if necessary, the new division has authority to "issue instructions to other governmental departments or agencies or other units of the War Production Board with respect to action required to effectuate the storage of commodities in the interest of the war effort."

Territories Escape ODT No. 1

Railways operating in Hawaii, Alaska, and the Canal Zone were on October 15 exempted from the requirements of the Office of Defense Transportation's General Order No. 1, which provides that a minimum load of 10 tons must be carried in all closed cars handling l.c.l. freight. The exemption is contained in Suspension Order ODT 1-1, issued by Director Eastman.

ODT Bus Order

Special Order ODT B-27 has been issued by the Office of Defense Transportation to coordinate bus operations of the Pennsylvania Greyhound Lines and the Eastern Shore Transit Company between Salisbury, Md., and Cape Charles, Va. The order supplements Special Order ODT B-7 under which the same companies had previously entered cooperative arrangements covering operations between Salisbury and Philadelphia, Pa.

ODT Appointments

Bernard A. Wahle, executive secretary of the National Trailways System, has been appointed acting chief of the Intercity Bus Section in the Office of Defense Transportation's Division of Local Transport. He succeeds Robert E. Maxwell, former treasurer of the Greyhound Corporation, who is joining the armed forces.

In the Division of Motor Transport, Elis T. Longenecker has been appointed chief of the Section of Operations, succeeding Edward J. Buhner. Mr. Longenecker, who had been Mr. Buhner's assistant for several months, was formerly a supervisor of the Bureau of Motor Carriers, Interstate Commerce Commission.

McNear Unable to Get Case Reopened

His wires to WLB and ODT yield no results—His figures questioned

The National War Labor Board has refused to meet a request of George P. McNear, Jr., president of the Toledo, Peoria & Western, for a further hearing in the proceeding involving the dispute between that road and its train and engine service employees. Wiring on the evening of October 15 its reply to Mr. McNear's telegraphic request of the same day, the Board said that its September 23 directive order and decision, which were made public on October 9, "constitute the Board's final determination." These findings were reported in the *Railway Age* of October 17, page 615.

The Board's reply to Mr. McNear was made by Wayne L. Morse, one of the public members, who wrote the unanimous report in the T. P. & W. case. "As pointed out in the Board's decision of September 23," Mr. Morse said, "your attack on the qualifications of Judge Hilliard to serve as arbitrator is wholly unjustified. The Board is unanimously of the opinion that its directive order of September 23 is a sound settlement of the dispute and the Board will require a full and complete compliance with the provisions of the directive order before it will recommend that the railroad be returned to your management.

"Your attention is called to the fact that you had ample opportunity to participate in the hearings before Judge Hilliard and introduce into the record of the case, for the consideration of Judge Hilliard and subsequent consideration of the War Labor Board, all the evidence and data which you consider pertinent to a settlement of the dispute. Your refusal to assist your government, except upon terms which you proposed to dictate, does not entitle you to reopen the case now that the War Labor Board is satisfied that your interests as well as the interests of the employees and of the government are adequately protected by the Board's directive order."

There was an exchange of telegrams this week between Mr. McNear and Director Eastman of the ODT, in which the former reiterated his charges of inefficient operation of the T. P. & W. The McNear telegram to Mr. Eastman read as follows:

"Have read with interest your speech in Chicago Friday broadcasting serious shortages of locomotives and equipment on the

railroads. As shown on page 32 and elsewhere in our 1941 report just published, the comparison of the operation on our railroad in March before the seizure with the operation under the featherbed rules which you established in July, shows a wasted use of one road locomotive each day and 112 yard engine-hours each week. These wastes are due solely to the requirements of the featherbed rules.

"Our railroad is less than one thousandth part of the entire national railroad system. If the present wastes on our railroad are any criterion for the railroads generally, there are something like 1000 road locomotives and possibly under 12,000 yard engine hours each week that could be put to better advantage if the featherbed rules were eliminated.

"The rearrangement and rescheduling of operations that could be effected by eliminating such rules would thus greatly reduce the demand that might otherwise have to be made upon our important locomotive works who now are so busy using their steel and manpower to turn out vital implements of war. Would appreciate your comments and would ask if you do not now feel that the wastes on our railroad should be stopped either by having the federal manager take the necessary action or by allowing us to do so."

To this telegram Mr. Eastman replied as follows: "Answering your telegram of 17th, your opinion regarding operation of Toledo, Peoria & Western does not appear to be based on actual facts. No further comment is deemed necessary. Suggest you comply promptly with directive order War Production Board."

It is understood that, if the T. P. & W. management does not thus qualify to resume operation of the property, the ODT may give consideration to arrangements for leasing the road to a connecting line, as the President's order directing ODT control of the road permits.

On October 17, Mr. McNear made a further attempt to secure a WPB hearing. "The discrepancy," he wired to WLB, "between your present statement and that of Chairman Davis on April 28 above quoted becomes particularly significant when there is considered the admission in your press release of October 9, that you had overruled Judge Hilliard on the retroactive date from which the new wage rates would apply. That was the only issue decided by Judge Hilliard and you overruled him on it.

"You allowed only 25 per cent of his award. It made a difference of about one year's pay for a hundred men. The other questions of wage rates and featherbed rules were not decided by Judge Hilliard, but by the brotherhoods and the federal manager. Although some erroneous figures were reported by the Office of Defense Transportation which gave the misleading impression that substantial savings had been effected in negotiation by the federal manager, these questions were settled virtually as demanded by the brotherhoods. I cannot agree with your contention that our case has been settled in the American way and in accordance with democratic processes. . . ."

Another ODT Travel Survey

Another survey of inter-city rail and bus travel, similar to the one made last May, is being conducted by the Department of Commerce's Bureau of Census for the Office of Defense Transportation during the week which began Wednesday, October 21. The ODT announcement said that the survey, covering 101 cities, is designed "to obtain an accurate picture of passenger travel under war conditions."

ODT Director Eastman asked the public to cooperate with the Census representatives who are interviewing a number of passengers from each schedule of a train or bus "to determine how and why their travel habits have changed since Pearl Harbor."

Floridians See Eastman About Train Schedule Freeze Order

Director Eastman of the Office of Defense Transportation this week received a Florida delegation headed by Governor Holland and agreed to consider their request that the recent ODT order freezing passenger train schedules be eased to enable persons who usually spend the winter in Florida to return this year. The ODT director is understood to have made no commitment to the delegation.

The Floridians stressed the fact that their interest was in the winter resident, and that they were not asking for train services to accommodate excursionists and vacationists who would make Florida trips during normal times.

More Illinois Central Scrap

During the first six months of 1942, the Illinois Central removed 608,000 lin. ft. of steel rail, of which amount 2,800 tons were sold for scrap and 360,000 lin. ft. went to Army depots and other defense projects for relaying; while approximately 800 tons of track fastenings, of which 75 per cent were serviceable, were removed with the rail. Long sections of hose used in yards and shops have been reduced to a minimum length; gray iron, malleable iron and cast steel castings are being substituted for aluminum and brass; and the use of copper and brass pipe and tubing has given way to steel and wrought iron pipe and tubing.

C. & O. Active in Scrap

The Chesapeake & Ohio, Nickel Plate and Pere Marquette have jointly produced 381,000 tons of scrap since the start of the war in Europe, of which 101,309 tons were released since Pearl Harbor. More than 82,000 tons of scrap cast iron wheels and over 11,000 tons of scrap brass and bronze were returned to manufacturers during the past three years for conversion and reissue on the roads. Relay rail, aggregating 24,500 tons, has been shipped to defense plants or used in constructing sidetrack for various industries along the lines. Iron and steel scrap, sent to steel mills, iron foundries and casting manufacturers, totaled 263,000 tons. The collection of scrap on the Chesapeake & Ohio is in charge of A. T. Lowmaster, vice-president and general manager on the Chesapeake & Ohio, E. A. Carlson, general storekeeper on the Pere Marquette, and M. B. Bowman, general storekeeper on the Nickel Plate.

On the Chesapeake & Ohio, collection centers have been established at Barboursville, W. Va., for handling and sorting rail and roadway scrap materials; at Huntington, W. Va., for locomotive, passenger car and miscellaneous scrap; and Russell, Ky., for freight car materials. On the Pere Marquette, scrapped rails and other roadway materials are being assembled and sorted at Saginaw, Mich.; while locomotive, passenger car and freight car scrap and miscellaneous material are handled at Grand Rapids, Mich. Bellevue, Ohio, is the center for all scrap collected on the Nickel Plate.

Text of Special Direction ODT 18-2 Is Corrected

On October 16 the Office of Defense Transportation issued a corrected text of Special Direction ODT 18, Revised-2, the exception to General Order No. 18 which applies to carload shipments that move by combination water-rail or rail-water-rail routes. The terms of the revised order were outlined in *Railway Age* of October 17, page 618. The corrected text does not change the intent of the special direction, but makes it clear that in cases where two or more cars have been used to transport a consignment of freight to a point where it is transferred to a water carrier (in a rail-water-rail movement) it is permissible to use the same number of cars to transport the consignment to its destination from the point where it is transferred from the water carrier to a railroad.

Lessees of Motor Vehicles Must Obtain ODT Certificates

After November 15, anyone who leases a commercial motor vehicle from another person "for a period of seven or more consecutive days" must obtain a certificate of war necessity to operate the leased vehicle, according to an October 16 statement from the Office of Defense Transportation. The announcement said that a ten-day grace period will be allowed the lessee in which to apply for his certificate, and meanwhile the responsibility for seeing that the certificate is obtained will lie with the lessor.

The phrase "leased for seven or more consecutive days" is constructed by ODT to include also a combination of separate leases which may be made by a person to cover operations of seven or more consecutive days.

ODT Permits Circuses to Finish Season

General Permit ODT 24-2 has been issued by the Office of Defense Transportation to allow circuses and carnivals to continue their tours until December 1 when they are expected to be in winter quarters. The permit, issued under General Order ODT-24 which froze passenger schedules as of September 28, allows the movement of companies which on or before October 5 owned or leased the cars they now are using. After the December

l expiration date, no further permits of this type will be issued, the ODT announcement said.

Meanwhile the present permit, effective retroactively to October 5, permits railroads to furnish only the motive power to move the entertainers' equipment, together with a car suitable for the train crew's accommodations.

Army Leases White Pass & Yukon

The White Pass & Yukon, a short-line railway extending from Skagway, Alaska, to Whitehorse, Yukon Territory, Can., has been leased by the United States Army for the duration.

The line provides rail connection between the coast and the Alaskan-Canadian Military Highway, which passes through Whitehorse, headquarters of the Northwest Service Command. The highway, as previously announced, is under construction by the United States Corps of Engineers and is expected to be completed for military use about December 1.

The Military Railway Service, of which Brigadier General Carl R. Gray, Jr., is Commanding General, with headquarters at St. Paul, Minn., is already operating the railroad, with Major John E. Ausland, Corps of Engineers, in charge. Technical supervision is under General Gray, who negotiated the lease for the War Department. The entire operation is under the jurisdiction of the Northwest Service Command, Brigadier General James A. O'Connor, Commanding General.

Average L.c.l. Load in August Approaches 10 Tons

In an analysis of August loadings of l.c.l. freight, the Office of Defense Transportation reports that the railroads were approaching compliance with the minimum load requirement of 10 tons effective September 1 under General Order No. 1. An increase of 265,680,000 lb. of merchandise freight was handled by 115 Class I roads in August, as compared with July, the statement points out, and 398,792 cars were loaded in such traffic, an increase of 9,300 cars over the July figure. The average load per car in August was 19,206 lb., as compared with 18,983 lb. in July.

Short line and terminal railroads in August used 62 fewer cars for l.c.l. shipments than in July, but loaded 601,000 lb. more of such freight. On these lines the average load per car increased from 15,253 lb. in July to 15,411 lb. in August. An increase of 8,722,000 lb. of merchandise was handled in August, as compared with July, by 16 freight forwarding companies, which increased the average load per car from 36,874 lb. in July to 36,938 lb. in August. All together 26 railroads reached the 20,000-lb. minimum l.c.l. load requirement in August, as compared with 24 in July.

ODT Gives Permits for Special Passenger Movements

Special permits under General Order No. 24, which "freezes" passenger train schedules and services, have been issued by Director Eastman of the Office of Defense Transportation in response to several applications for relief from its requirements. The first permit, issued October 5, authorized the Baltimore & Ohio to operate a special passenger train from Hamilton, Ohio, to Middletown, Ohio, and return to transport employees of the American Rolling Mill Co. to and from a ceremony at which the Navy "E" flag was awarded that company.

Two permits were issued to allow railroads operating between Chicago and Florida to handle a special car, chartered in each case for the use of an invalid, with the provision that the inclusion of the special car in the train consist would "not require the operation of an extra section that would not otherwise be operated."

A fourth special permit, issued October 14, authorizes the Central of New Jersey to operate as many additional passenger train schedules between New York and Thirty-second Street, Bayonne, N. J., as may be necessary to afford adequate transportation for employees at a U. S. Navy Depot at that point.

Treasury Praises Railroad War Bond Subscription Record

The American railroads are now "headed full speed towards the goal" of getting War Savings Bond subscriptions under the payroll deduction plan for 10 per cent of their entire monthly payroll of $270,258,000, the Treasury Department's War Savings Staff announces in a "Railroad Edition" of its monthly publication, "Payroll Savings News." Because the railroad industry has more than 1,500,000 employees spread through the length and breadth of the country, the statement points out, the task of committees chosen to interview individual employees is more difficult than in many industries where the staff is centralized at one point.

The publication includes messages from several railroad officers and labor leaders intended to stimulate the bond subscription campaign, as well as a number of illustrations of means adopted on different lines to sustain interest in the movement. A full account is included of the methods used on the Boston & Maine to approach every employee, which resulted in that road's record of being the first in the country with

* * *

World War II's Army Locomotive

Built by Baldwin, this standard locomotive is already on the job at one of the fighting fronts. Standing beside it are Lt. Col. E. F. MacFadden, Maj. J. W. Marsh, and Col. W. C. Knight, all of the Corps of Engineers. The locomotive is described by Major Marsh as having 19 in. x 26 in. cylinders, with 57-in. drivers. Weight is given at 288,950 lb. "These new Army locomotives," says Maj. Marsh, "do not contain any new or untried devices, and have been designed to operate wherever materiel and troops must be moved by rail."

more than 300 employees to report subscriptions amounting to 10 per cent of its monthly payroll. One method that proved effective, the report states, was to require daily reports from every subcommittee, and to distribute the system report based on these daily reports promptly all over the system, so that each division and craft could compare its record with others. A motor track inspection car was used to round up stragglers and employees at outlying points whose duties made it difficult for them to attend general meetings.

Traffic Prospects Surveyed by Agricultural Economists

"Conditions are now developing which indicate that many drastic adjustments in marketing and transportation facilities and methods are inevitable," states the Bureau of Agricultural Economics of the U. S. Department of Agriculture in the September-October issue of its publication, the Marketing and Transportation Situation. Pointing out that many uncertainties are involved in predicting the volume of traffic the railroads will have to carry in 1943, the review indicates that an increase in traffic of perhaps 15 per cent over 1942 will develop.

This prediction coincides with that made by M. J. Gormley, executive assistant of the Association of American Railroads, at the September 16 meeting of the Great Lakes Shippers Advisory Board.

Outlining some of the new factors that will influence traffic movements in 1943, the report suggests that "a zoning or certificate system which will deprive sellers of distant markets and cut down ton-miles may be used. The production of civilian goods may be concentrated in such a way as to minimize the demands upon the transportation system. Production in the war plants may be rearranged with an eye to lessening the volume of traffic. Also, many goods will have moved to their destination and need not be replaced in the future. This category includes capital goods, lease-lend materials, and building materials. Passenger traffic may also level off in 1943. The armed forces will doubtless increase their personnel, but at the same time increasing numbers will be stationed abroad, thus offering no demand for rail service at home. Possibly aircraft will be used to carry an increasing number of passengers, especially government officials and military personnel."

Prospects for expansion in the volume of motor traffic are definitely not favorable, the report adds. "In fact, the chances are good that motor carriers will not be able to haul as much traffic in 1943 as in 1942. . . . as the situation tightens, the effects of shortages upon the volume of traffic will depend upon the answers to three questions: How much decline will occur in total motor capacity? How much of their former load will be diverted to the railroads? How much of their traffic will go out of existence? We can be sure that there will be *some* reduction of carrying capacity, *some* diversion of traffic to the railroads, and *some* destruction of traffic. But we cannot begin to estimate these reductions quantitatively until policies toward gasoline, tire, and equipment rationing are finally determined and applied."

The possibility of a shortage of refrigerator cars during 1943-1944 is strong, the authors of the report believe. In fact, they suggest that an "acute" shortage of refrigerator cars may develop during the present fall and winter if there is an increase in the proportion of perishable foods shipped fresh rather than processed, or in the proportion shipped by rail instead of by truck. It is pointed out that any plans for the diversion of large volumes of fruits and vegetables from canning plants to fresh produce distributors that will increase the demand for refrigerator cars or locomotives will almost certainly bring about a shortage in equipment.

Turning to a survey of prospects for changes in transportation charges, particularly those affecting agriculture, the report says, "in view of the recent price and wage stabilizing policy adopted by the government, further significant increases in rail costs will probably not develop and horizontal percentage rate increases will not be necessary." Because truck operating costs form a much greater proportion of their total costs than do railroad operating costs, the report continues, "the railroads are accordingly in a better position than the motor carriers to avoid or at least to delay rate increases when their variable costs go up."

ODT Sets Up Staff To Control Transport in Puerto Rico

Acting on a report prepared by a commission appointed to investigate the current condition of rail and motor transportation facilities in Puerto Rico, Director Eastman of the Office of Defense Transportation has established a regional office of ODT on the island. Through it conservation measures will be applied to all phases of transportation there.

The investigators reported to Mr. Eastman that "unless proper measures are taken without delay, collapse of highway transportation will be a question of but six or eight months." This, it was added, "would overburden already heavily burdened railroads." Railroads on the island were reported to be giving "fairly satisfactory service." Even so, the investigators reported, they "can render greater service with the equipment on hand" by putting into effect various measures designed to make more intensive use of their facilities.

M. Garcia de Quevedo, a native of Puerto Rico, a former examiner for the Interstate Commerce Commission and recently a consultant for the ODT, has been named assistant to Director Eastman, in charge of Puerto Rican affairs, with offices in Washington, D. C. The ODT regional director for Puerto Rico appointed at the same time is Charles G. Anthony, who has been an officer of several motor freight lines, in California. Paul H. Quinn, recently president of the Arcade & Attica, is appointed assistant director in charge of railroads. Park M. Smith, recently associated with the National Association of Motor Bus Operators, becomes assistant director in charge of passenger transport, while the new assistant director in charge of motor trucks is Joseph P. Herrin, general manager and secretary-treasurer of Herring Motors Lines, Shreveport, La.

Bulky Shipment No Stalemate

A special 4-car freight train carrying the bulkiest single shipment ever to be handled out of Boston by the railroads began its 425-mile journey over the lines of the Boston & Maine recently to an undisclosed destination. The shipment consisted of a huge gear, together with its casings and auxiliaries, built for use in connection with the war effort. The gear weighed 89,000 lb. and its width was two feet more than the standard maximum.

For weeks the engineers of the Boston & Maine, the Rutland, and the New York Central and a terminal railroad measured bridges, width of cuts and other clearances, and finally figured out a route over which the shipment might safely pass. Because of its bulk, however, the special train was forbidden to pass any other train on an adjoining track en route. The schedule was so arranged to keep the train moving, while at the same time causing no delay to other freight or passenger service. A regular shipment between the same

The Cars Carrying the Out-Size Shipment Just Clearing a Bridge Enroute

point of origin and destination would have had to travel only about 235 miles.

Further Drop in East-Coast Oil Shipments

Reporting tank car shipments of oil to the East Coast at a daily average of 766,410 barrels for the week ended October 10—the lowest for any week since July 18—the Office of Petroleum Coordinator Ickes this week expressed concern "as to whether rail movement could again be restored to the record levels of August and September." The September 10 week, with average daily loadings 2,514 barrels under the previous week, was the third week of the continuing decline from the peak of 856,710 barrels daily attained in the September 19 week.

"Although we are still hopeful that we may be able to maintain a daily average of 800,000 barrels through the winter, it is becoming increasingly evident that the assignment will be a most difficult one for the oil industry and the railroads," Deputy Petroleum Coordinator Davies said. "A number of factors, including the necessity of diverting tank cars for essential military use as well as to other special services, are operating now to retard the movement of oil to the Atlantic Seaboard, and may be expected to continue to operate in that fashion. What the result will be when there is added the factor of winter weather no one can predict. I can only express the confidence of the Office of Petroleum Coordinator that the oil industry and the railroads will do the best job possible under the circumstances."

According to the OPC announcement, Mr. Davies attributed last week's falling off to several factors. One was "an unavoidable 24-hour delay in the return of between 1,800 and 2,000 empty tank cars to the West for reloading," the cars having been help up "because of traffic congestion on a particular railroad which was handling certain special movements." Another was "the continued transfer of tank cars from petroleum service to the vegetable oil and related services," a check having indicated that 500 tank cars have thus been transferred during the past three weeks, while still more will be shifted under the War Production Board's recent priorities directive. Mr. Davies also said it is possible that the Office of Defense Transportation's recent order requiring that all cars of less than 7,000-gal. capacity be removed from the East-coast service "has caused cars to be withdrawn from the Eastern movement and that these cars have not yet been replaced by larger cars."

Meanwhile on October 20 OPC announced the through-scheduling of 600 carloads of home heating oil and other refined petroleum products daily, direct from Gulf Coast and Mid-Western refineries to New England terminals and industries. Agreement to ship this number of cars each day in solid trains was reached in meetings in New York last week between representatives of the oil industry and the Transportation Division of OPC. As a result, nine and one-half trainloads of refined products will be made up daily at the larger western refineries and consigned direct to the principal terminals in New England. Some of the movements have already been started and the remaining trains are expected to be in operation in the near future. In addition, 200 carloads have been scheduled to move daily—in three solid trains—from the Gulf Coast to terminals in the New York Harbor area.

In his other role of solid fuels coordinator, Mr. Ickes also announced that all-rail shipments of coal into New England during the week ended October 10 totaled 5,828 carloads, or approximately 320,540 tons—down 685 carloads, or approximately 37,675 tons, from the previous week.

Senate Approves Additional $5,200,000 for ODT

The conference report on H.R. 7672, adopted by the House on October 21 and by the Senate the following day, restores the original House version of those provisions authorizing the War Department to spend unobligated balances of existing waterway appropriations. Thus expenditures under the authorization will be limited to the Gulf Intracoastal Waterway, the broader senate provision which would have made the Florida Ship Canal eligible, as noted below, having been rejected by the Conference Committee.

The Senate on October 20 passed and sent to conference its version of H.R. 7672, the supplemental national defense appropriation bill, carrying $5,200,000 for the Office of Defense Transportation which will be in addition to the $7,216,515 ODT has already received for the current fiscal year ending June 30, 1943. The Senate did not change the ODT appropriation as authorized by the House, but it did amend provisions authorizing the War Department to spend unobligated balances of existing civil-functions appropriations in such a way as to make the Florida Ship Canal eligible for such expenditures.

As noted in the *Railway Age* of October 17, page 619, the House version authorized the War Department to spend the balances for work on the enlargement of the Gulf Intracoastal Waterway; and the record of House appropriations committee hearings on the bill showed that Major General T. M. Robins, assistant chief of engineers, had testified that work on the canal "is not intended to start at this time on account of the critical materials situation and the equipment and the manpower that would be required." However, Senator Pepper, Democrat of Florida, appeared at hearings before the Senate appropriations sub-committee which had the bill under consideration and secured adoption of an amendment which would permit the use of the funds for work on all projects authorized "by the Act approved July 23, 1942." This includes the canal as well as the intracoastal waterway improvement. The committee did, however, include in its report a recommendation stipulating that the amendment had been drafted "with the understanding that priority will be given to the project named in the House bill. . . ."

Director James M. Landis of the Office of Civilian Defense was less successful before the committee. Like the House committee it turned down OCD's request for $1,042,000 for a protective program, including $102,000 to be allocated to ODT for the purpose of financing the latter's set-up for the protection of railroads against sabotage, etc. Mr. Landis told the subcommittee that "our railroads today are not, in the judgment of the Army, and as shown by such surveys as we have made, as well guarded as they should be." ODT, he went on, proposed to use the money to employ 14 men to make surveys to "bring out these critical points that exist," and to bring them to the attention of railroad management. The guarding, he explained, would be done by regular railroad forces. Senator McCarran, Democrat of Nevada, said that "in the west the railroads are being guarded by the Army now." And Mr. Landis agreed that this was true "at some points," adding that "there are more critical points where no guarding is being done."

He also said that the Army was anxious to be relieved of such assignments, because it does not desire "to deploy troops that might be used for offensive warfare on police work." Senator McCarran did not think that the forces involved would be available "for first-line warfare," it being his understanding that they were "military police and certain divisions that belong to that outfit." Other questioning indicated that some of the Senate committee members were in accord with the view expressed in the House committee's adverse report on the item, i.e., that the primary responsibility for the protection of the facilities involved rests with the owners.

Other transport phases of the measure included that increasing from $110,653 to $122,400 the limitation in the Intrastate Commerce Commission's present appropriation on travel expenses of locomotive inspectors, which will permit the commission to increase the subsistence allowance from $5 to $6 per day. Also, the increase from $5,000 to $20,000 in the limitation on the amount which the Commission may spend to transfer household goods of its employees moving from one assignment to another. The former provision was in the House bill while the latter came along from the Bureau of the Budget while the bill was before the Senate committee.

I. C. C. Amends Service Order on Coal-Car Demurrage

The Interstate Commerce Commission on October 16 issued Amendment No. 1 to Service Order No. 87, providing that the order's requirements in connection with the suspension of demurrage tariff rules and reduction of free time "shall not apply to cars of coke delivered to vessels at Newport News, Lambert Point or Sewalls Point, Va., having destination outside the capes of Virginia, and to point on the Albemarle, Pamlico, and Currituck sounds, and tributaries thereto; and shall not apply on cars of coke delivered to vessels at Canton, Curtis Bay, Locust Point or Port

Covington (Baltimore), Md., for movement to points beyond the capes of Chesapeake Bay, or delivered to vessels at Port Richmond or Greenwich Piers (Philadelphia), Pa., for movement to points beyond the capes of Delaware Bay, the average free time on such cars being ten days as provided in Rule 2 of said tariff."

Canada Takes 3-Day Census of Passenger Travel

As a possible first step in the rationing of railway travel in Canada, a three-day census of the passengers carried by Canada's railways and bus lines was taken on October 16, 17 and 18.

The order was issued by the Transport Controller, Department of Transport, and was described as "a matter of vital importance to the railways' war effort, and accordingly must receive special attention."

Compilation of the information obtained through the census must be done promptly after October 18, and will show the total number of tickets in each of various categories listed.

The information is to be divided into two sections, one for civilian travel and the other for travel by members of the armed forces.

In the civilian section, ticket agents were required to list every week-end ticket sold at week-end fares; week-end tickets sold at commercial travelers' rates; all one-way tickets; all round-trip tickets sold at fares other than week-end.

For the armed forces, the ticket agents, during the three day period listed all tickets sold in exchange for warrants where no fare is collected; all tickets sold on surrender of (blue) furlough warrants, where one-third of the fare is collected; tickets sold at one-way fare for the round trip, and tickets sold at one-way fare for one-way trips.

Where party tickets were issued, they were counted, for the purpose of this report, not as one ticket, but as of the same number as that of the passengers they cover. Commutation tickets are not included in the report.

On completion of the survey, traffic officers will compile the information on cards provided for the purpose, showing the amount and type of travel on each of the three days, and the totals of each type.

Materials and Prices

Following is a digest of orders and notices of interest to railroads issued by the War Production Board and the Office of Price Administration since October 9.

Lumber—Lumber dealers who need priority assistance to purchase softwood lumber for use in important war and civilian construction may now apply to WPB on Form PD-1X, according to an announcement on October 16, but may not obtain assistance on purchase orders to which ratings may be applied within the restrictions of Conservation Order M-208, which imposes restrictions on the extension of preference ratings for replacement of inventories.

Scrap—The working relationship between the Special Projects Salvage Section of WPB and War Materials, Inc.—a newly organized subsidiary of the Reconstruction Finance Corporation—as announced October 16, provides that projects will be located and investigated by the field force of the Special Projects Salvage Section, which also will advice the owner regarding the transfer of title to War Materials, Inc.; while War Materials, Inc., will engage and pay contractors to demolish the structure. The object of the co-ordination is to increase the amount of scrap iron and steel obtained from structures where the cost of demolition exceeds the value of the metals.

Steel—A new system governing distribution of steel products to warehouses, effective November 1, to make a reasonable, but limited tonnage of steel products continuously available for emergency purposes, directs producers who normally supply warehouses to ship definite tonnages of specific products to warehouses each month on rated orders. Instructions are supplemental to the directives which have been issued by the Iron and Steel Branch for the past two months. Under the present system, warehouse purchase orders are filled in the sequence indicated by preference ratings, which often have been too low to enable warehouses to obtain necessary supplies. Virtually all of the steel products obtained by warehouses under the system to take effect November 1 will flow directly into the war production program or into other essential uses such as railroad maintenance. Under Order M-21-b, as amended, warehouses are permitted to sell most steel products only on A-1-a or higher rated orders, except for small percentages sold under repair and maintenance orders such as P-100. Certain other items, such as wire, nails, and staples may be sold by warehouses for repair purposes without a preference rating. Over-all monthly tonnages needed for distribution by warehouses will be determined by the Iron and Steel branch. This tonnage will be divided among producing mills, according to the pattern of orders on hand from warehouses.

Tools—Amendment No. 2 to General Preference Order E-6, issued October 10, limits sales and deliveries of hand service tools by manufacturers to purchase orders rated A-9 or higher. At the same time, further limitations are placed on the types of alloy steel from which hand service tools may be manufactured. Tools covered by the order include chisels, hammers, files, pliers, punches, screwdrivers, snips and wrenches. In the original order, sales and deliveries of hand service tools by manufacturers on purchase orders rated as low as A-10 were permitted. Schedule B of the order lists the series of alloy steel which may be used in the manufacture of hand service tools. Originally there were eight series listed. The amendment lists only five series, the effect being to permit the use of a lesser amount of critical alloying elements, particularly molybdenum. However, any alloy steel in a series not listed, but which has been received by a producer for use in the manufacture of hand service tools before November 1, 1942, may be used.

Prices

Equipment rentals—Amendment No. 3 to Maximum Price Regulation No. 134, effective October 16, covers not only the rental of construction and road maintenance equipment but also operating or maintenance services on such equipment. The amendment brings under one regulation charges for related rentals and services which were covered by several regulations. While it adjusts maximum rentals on a number of individual pieces of equipment, it makes no material change in the general level of prices. Provisions establishing maximum rentals for construction and road maintenance equipment are clarified and extended to cover fractional weekly and monthly rental periods. A method for establishing maximum rentals for leases on a per-hour basis is also provided. Maximum rentals for additional items of equipment, such as backfillers and pipelayers, have been added to the list of individual items for which dollars-and-cents maximums are provided. The list of types and sizes covers more than 1,000 different items. The amendment defines operating or maintenance services to include all repairs or maintenance work on construction or road maintenance equipment, whether rendered on or off the job; and also the supplying of an operator, mechanic or oiler for the operation or maintenance of such equipment and the supplying of fuel, oil or other lubricants in connection with any of the repair or operating services.

Malleable castings—Maximum Price Regulation No. 241, effective October 21, establishes maximum prices for malleable iron castings at the highest prices charged for the same or substantially the same castings between October 1 and October 15, 1941, inclusive. If the castings were not sold between October 1 and October 15, 1941, maximum prices are to be computed according to the pricing method and costs and profit margins in effect for the seller on October 15, 1941. In such cases, direct material costs must be computed on a basis no higher than the actual costs to the seller of such materials, not to exceed OPA maximum prices, whether these costs are higher or lower than those prevailing on October 15, 1941. Costs of machining let out to other firms may be computed on the basis of the seller's actual costs, not to exceed OPA maximums, even though these are higher than his costs on October 15, 1941. Overhead rates are to be computed on the basis of the seller's actual costs and volume of production for the period from January 1, 1942, to June 30, 1942, with labor costs adjusted on the basis of October 15, 1941, wage rates. By November 20, each seller must file three copies of price lists in effect between October 1 and October 15, 1941. By December 20, he must file with the OPA Regional office information as to wage rates, profit margins and pricing methods in effect for him on October 15, 1941.

Steel castings—Maximum Price Regulation No. 235, effective October 14, reduces ceiling prices for manganese steel castings and products to the levels prevailing between October 1 and October 15, 1941. Previously ceiling prices for these castings were fixed by the General Maximum Price Regulation at the highest levels prevailing during March, 1942. The new regulation, in effect, lowers ceilings substantially, for prices had been advancing in the final 1941 and initial 1942 quarters. In the fourth quarter of 1941, average prices per pound were 4.4 per cent above the third quarter; and in the opening three months of 1942, a further increase lengthened the advance over the third quarter of 1941 to 10 per cent. The regulation establishes prices for castings in three categories: the published price lists in effect for a seller and distributed to one or more of the seller's customers between October 1 and October 15, 1941, are the maximum prices for such a seller; for castings or products other than those of the first category, specific maximum prices which were in use in general throughout the industry during the October 1-15, 1941, period, are listed as the maximum prices; for castings or products not in the first and second categories, maximum prices are those based on October 1-15, 1941, cost factors and profit margins, approved by OPA.

Tires—Details of a nation-wide program for periodic inspection of the tires on all operating vehicles were announced October 16. Neither private passenger automobiles nor commercial vehicles will be certified for continued operation when their tires need repairs or when mechanical faults are causing unnecessary tire wear. Commercial vehicle tires must be inspected every two months or every 5,000 miles, whichever comes first.

* * *

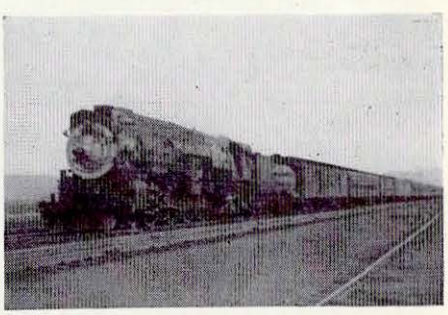


Photo by Hugh F. O'Neil

S. P.'s Second 88 Eastbound, Near Montello, Nev.

GENERAL NEWS

Truck Permits Go to B. & M. Contractors

Actual operators of vehicles, not transport company, get the rights

Boston & Maine Transportation Company oral arrangements with four trucking companies for the operation of New Hampshire routes in substituted freight service for the Boston & Maine do not suffice to make B. & M. T. a motor carrier as defined in the Motor Carrier Act, according to an Interstate Commerce Commission decision which rules that certificates covering the operations should go to the contract truckers. The decision by Division 5 was in No. MC-75872 (Sub-No. 1) and two related proceedings; they involved B. & M. T. applications for common-carrier certificates covering four routes, and the application of Edward Crowley & Son for a contract-carrier permit covering one of them.

The routes covered by the B. & M. T. applications are between Manchester and East Weare, between Henniker and East Weare, between Concord and North Weare, and between Danbury and Bristol. The latter was the route on which Crowley sought the permit, while the others are operated by C. E. Dodge & Co., Paul H. Saltmarsh, and the Carr Trucking Company, the first two having contract-carrier permits and Carr a common-carrier certificate.

With the foregoing set-up before it, the commission proceeded to bring it into line with principles announced in its recent decision on the general application of the B. & M. T. (see *Railway Age* of September 5, page 382); in *Substituted Freight Service*, 232 I. C. C. 683; and in *Dixie Ohio Express Co., Common Carrier Application*, 17 M. C. C. 735. From the first of these prior decisions the commission applied here that rule to the effect that a single transportation service cannot be the basis for multiple rights either as common carriers or contract carriers, while the rule of the Substituted Freight Service case made it "clear" that the operations, being substitutes for rail freight service, are common-carrier operations. Thus the commission denied Crowley's contract carrier application and proceeded to a determination as to whether the common-carrier certificate should go to Crowley or B. & M. T. It decided in favor of the former when it found no evidence that B. & M. T. would meet the test of the Dixie Ohio case by having the vehicles operated under its direction and control and under its responsibility to the general public as well as the shipper.

In like fashion did the decision dispose of the other B. & M. T. applications, meanwhile announcing that the contract carrier permits granted before the Substituted Freight Service decision to two of the other truckers listed above (Dodge and Saltmarsh) will be changed to grants of common-carrier certificates instead.

Co-ordinated Advertising

Twelve eastern railroads have begun a co-ordinated newspaper advertising campaign—each carrier in its own local territory—to publicize, especially, the relationship between efficient railroad service and effectiveness in progressing the nation's war program.

This is not a joint campaign—each railroad is inserting, and paying for, its own advertisements. But the participants are working together, so that their copy is complementary both as to subject matter and timing.

The carriers co-operating in this program are the Alton, Baltimore & Ohio, Boston & Maine, Chesapeake & Ohio, Delaware & Hudson, Delaware, Lackawanna & Western, Erie, Lehigh Valley, New York Central, Norfolk & Western, Pennsylvania, Reading.

Senate Investigation of Rail Financing

Senator Truman, Democrat of Missouri, has introduced Senate Resolution 304 to continue in effect during the next Congress (the 78th) Senate Resolution 71 under which the investigation of railroad financing has been conducted by a sub-committee of the Senate committee on interstate commerce. No hearings have been held for more than a year, but reports based on previous hearings have been issued from time to time.

Gets Twenty Years for Attempting to Wreck Panama Ltd.

Conviction on two charges, a sentence of 20 years in prison and a fine of $10,000 were given John E. Payne, 32-year old negro, by the District Court at Memphis, Tenn., on October 13, for attempting to wreck the Panama Limited of the Illinois Central on July 14. One count charged Payne with attempting to "derail, disable and wreck a railroad passenger train," and the other with attempting "to undermine tracks, rails and other property used on the roadbed of the Illinois Central."

OPA Is Rate Case Agent for Byrnes

Economic director parcels out his power, WLB getting that over wages

The Office of Price Administration has been designated by James F. Byrnes, director of the Office of Economic Stabilization as the agency to intervene in proceedings involving proposed increases in rates of common carriers and public utility companies. The assignment was announced in the statement which Director Byrnes made last week at his first meeting with his advisory group—the Economic Stabilization Board.

The recently-enacted "anti-inflation" legislation, which OES was set up to administer, contained a provision stipulating that no common carrier or utility could make any increase in its September 15 rates unless such carrier or utility gave 30 days notice to the President or such agency as he might designate and consent to the intervention of a Presidential representative in the proceeding involving the proposed increase. As noted in the *Railway Age* of October 10, page 573, the President designated OES Director Byrnes as the agency to receive such notices; and Mr. Byrnes has now passed the job along to OPA. "The Office of Price Administration is the agency best suited to represent the interests of the consumers in these matters," he said.

With respect to the salary-control phases of his assignment, Director Byrnes announced that he was arranging to have them handled by the National War Labor Board and the Treasury. As noted also in the issue of October 10, the executive order creating OES called for widespread controls, including a ceiling of $25,000 a year on salaries after payment of taxes and "due allowance" for the payment of life insurance premiums and fixed obligations contracted prior to the issuance of the order. "All salaries under $3,000 a year and those salaries up to $5,000 which are covered in wage agreements are to be regulated by the War Labor Board," Director Byrnes said. "For salaries over $3,000 other than those handled by the War Labor Board as part of wage agreements, the Treasury Department is preparing regulations."

Proceeding meanwhile under the powers which it received in the executive order WLB has issued a general order setting forth individual wage adjustments which can be made without WLB approval. Adjustments thus exempted are those "incident

to the application of the terms of an established wage agreement or to established wage rate schedules covering the work assignments of employees"; and they must be made as a result of: (a) Individual promotions or reclassifications; (b) individual merit increases within established rate ranges; (c) operation of an established plan of wage increases based upon length of service; (d) increased productivity under piece-work or incentive plans; (e) operation of an apprentice or trainee system.

The order also stated that such adjustments "should not result in any substantial increase of the level of costs and shall not furnish a basis either to increase price ceilings of the commodity or service involved or to resist otherwise justifiable reductions in such price ceilings."

New "Chandler" Act Signed

President Roosevelt has signed H.R. 7121, the recently-enacted bill to provide for voluntary reorganizations of railroads. The act which was this time sponsored by Representative McLaughlin, Democrat of Nebraska, is a reenactment of the former Chandler Act, and it is limited to proceedings initiated on or before November 1, 1945.

B. & O. Cartoon Series

The Baltimore & Ohio recently instituted a newspaper advertising campaign designed to tell the story of the American railroads at war. The campaign features illustrations by Hutton, the Philadelphia Inquirer's nationally-famous cartoonist, which are accompanied by terse, informative copy depicting the vital role the railroads are playing in the United Nations' war effort. The advertisements are currently appearing in 208 newspapers throughout 120 cities in the East. The Richard A. Foley Advertising Agency, Inc., of Philadelphia, prepared the campaign.

September Operating Revenues 40 Per Cent Above 1941

Preliminary reports from 86 Class I railroads, representing 81 per cent of total operating revenues, made public October 17 by the Association of American Railroads, show that those roads, in September, had estimated operating revenues amounting to $554,787,382, compared with $396,316,391 in the same month of 1941, or an increase of 40 per cent.

Freight revenues of the 86 roads in September amounted to $435,085,504 compared with $331,773,850 in September, 1941, or an increase of 31.1 per cent. Passenger revenues totaled $84,135,078 compared with $36,277,888 in September, 1941, or an increase of 131.9 per cent.

Suspends Tariffs Canceling Rule 34's Substitution Provisions

The Interstate Commerce Commission has suspended from October 20 until May 20, 1943, tariffs wherein the railroads were proposing permanent cancellation of those provisions of Rule 34 of the Consolidated Freight Classification which cover the furnishing of cars at variance with shippers orders, i. e., the substitution provisions.

The suspension order dockets the proceeding as I. & S. No. 5156 and sets it for hearing on November 6 at the Hotel Morrison, Chicago, before Examiner Snider. The rules involved have been set aside for the duration in the commission's Service Order No. 68, effective since February 15.

Chicago Car Foremen Elect Officers

At the annual meeting and smoker of the Car Foremen's Association of Chicago on Monday evening, October 12, the following officers were elected to direct the activities of the association during the coming year: President, H. B. Atherton, car foreman, Chicago Great Western, Chicago; first vice-president, W. J. Burns, mechanical inspector, General American Transportation Corporation, Chicago; second vice-president, J. Krupka, car foreman, Chicago, Burlington & Quincy, Chicago; G. K. Oliver, assistant passenger car foreman, Baltimore & Ohio Chicago Terminal, was re-elected secretary and C. J. Nelson, superintendent, Chicago Car Interchange Bureau, was re-elected treasurer.

Development Association Gets New President

E. G. Reed, first vice-president of the American Railway Development Association and general livestock agent of the Union Pacific at Omaha, Neb., has become president of that association following the resignation of J. M. Hurley, agricultural and industrial agent of the New York, Ontario & Western. E. J. Leenhouts, second vice-president of the association and general agricultural and livestock agent of the New York Central at Rochester, N. Y., becomes first vice-president and H. C. Millman, secretary-treasurer of the association and industrial agent of the Pennsylvania at Chicago, becomes second vice-president. He will also continue as secretary-treasurer.

Boston & Maine Gets Award for Its Newspaper Advertising

The Boston & Maine has been awarded the so-called "Socrates High Award" for the year 1942 for excellence in its newspaper advertising, it was announced recently. The award reads: "Having reviewed and analyzed the ads of over 5,000 leading national advertisers during the past 12 months, Socrates and his staff of advertising executives have given the award to the Boston & Maine for having scored the most points in the monthly cumulative score card." The cumulative award is scored from October 1 to September 30 of each year.

In connection with the award, the Committee of Advertising Executives gave special recognition to Herbert L. Baldwin, publicity director and executive secretary of the advertising committee of the B. & M., and Harold Cabor & Co., Boston, its advertising agency, for their part in handling the B. & M.'s advertising campaign.

In announcing the award, National Ad-Views, a nationally-circulated publication in the advertising field, had this to say: "The road has set a new style in railroad advertising which, it seems, is being reflected more and more throughout the country as railroads depart from the staid and get into the modern vein which people understand and read. . . . Summed up, the Boston & Maine was the first railroad in the country to adopt the candid and frank approach in its advertising, for it has 'talked plain New England language' for the past five years."

Motor "Traffic Barrier" Down

A recent act voted by the General Assembly of Virginia in the course of a special session called for other purposes has won the praise of Director Eastman of the Office of Defense Transportation as an example of state co-operation with his office in effecting removal of "traffic barriers" that are said to delay or impede motor transport movements important in the war emergency. The act referred to permits a motor vehicle drawing one other vehicle by tow bar to move within or across the state. An agreement had been in effect under which state authorities granted approval for such movements in individual cases on ODT request, but the change in the law will eliminate need for this procedure, described in the ODT announcement as "cumbersome."

Proposed L.c.l. Proportional Rates Withdrawn

Because the interested railroads have filed tariffs canceling the schedules under suspension, the Interstate Commerce Commission has discontinued the I. & S. No. 4774 proceeding involving proposed "all-commodity proportional l.c.l. rates from Tennessee and Mississippi break-bulk points to destinations in those states. As noted in the *Railway Age* of July 25, page 150, where the examiner's adverse proposed report was reviewed, the proportionals were designed to obtain for the railroads freight-forwarder traffic moving out of the break-bulk points by truck; they would apply on interstate traffic arriving at the break-bulk points by rail, in carloads, and reshipped l.c.l. within 48 hours after the expiration of the free time allowed on the inbound movement.

United States Army Leases Yukon Railroad

At the first fall meeting of the Western Railway Club, Chicago, on Monday evening, October 19, and featured by an address on Railroad Men in This and Other Wars by Brig. Gen. Carl R. Gray, Jr., general manager, Military Railway Service, the general made an important announcement bearing on transportation in Alaska, to the effect that construction of the new military highway to Alaska is expected to be completed by December 1, and the United States Army has leased 111 miles of the White Pass & Yukon line, from Skagway, Alaska, to Whitehorse, Yukon Territory, thus providing a rail connection between the Alaskan coast and the northern terminal of the military highway.

General Gray said that temperatures as low as 72 deg. F. and virtually continual

gales of 35 miles an hour add to operating difficulties on this line which is already functioning under the direction of Brig. Gen. J. E. Ausland, C. E., with technical supervision under the direction of General Gray, who negotiated the lease for the War Department. The entire project is under the jurisdiction of the Northwest Service Command, of which Brig. Gen. James A. O'Connor is commanding general.

Freight Car Loadings

Loadings of Revenue freight for the week ended October 17 totaled 900,767 cars, the association of American Railroads announced on October 22. This was a decrease of 9,190 cars, or one per cent, below the preceding week, a decrease of 22,117 cars, or 2.4 per cent, below the corresponding week last year, and an increase of 86,858 cars, or 10.7 per cent, above the comparable 1940 week.

As reported in last week's issue, loadings of revenue freight for the week ended October 10 totaled 909,957 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, October 10

District	1942	1941	1940
Eastern	163,353	184,753	162,245
Allegheny	187,320	192,787	166,267
Pocahontas	55,016	60,240	47,157
Southern	126,761	127,262	111,432
Northwestern	153,477	141,089	142,210
Central Western	145,201	137,200	125,862
Southwestern	78,829	60,546	56,733
Total Western Districts	377,507	338,835	324,805
Total All Roads	909,957	903,877	811,906
Commodities			
Grain and grain products	50,997	36,553	37,274
Live stock	22,510	20,226	21,709
Coal	167,109	171,699	120,310
Coke	14,479	13,154	11,581
Forest products	49,541	44,832	41,097
Ore	78,855	64,096	70,362
Merchandise l.c.l.	92,759	160,718	160,661
Miscellaneous	433,707	392,599	348,912
October 10	909,957	903,877	811,906
October 3	907,607	917,896	806,004
September 26	897,714	919,794	822,434
September 19	903,099	907,969	813,329
September 12	814,885	914,656	804,265
Cumulative Total, 41 Weeks	34,053,743	33,089,522	28,207,950

In Canada.—Carloadings for the week ended October 10 totaled 73,952 as compared with 69,987 for the previous week and 68,043 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
October 10, 1942	73,952	36,113
October 3, 1942	69,987	36,829
September 26, 1942	67,833	37,298
October 11, 1941	68,043	30,865
Cumulative Totals for Canada:		
October 10, 1942	2,634,129	1,383,812
October 11, 1941	2,468,156	1,207,055
October 12, 1940	2,173,370	1,001,002

R. & L. H. S. Bulletin Features Civil War Railroads

An article on the U. S. Military Railroads features Bulletin No. 59 of the Railway & Locomotive Historical Society. Included is the report rendered by Col. D. C. McCallum, general manager of the U. S. Military Railroads, written in 1866, and lists of the locomotives used on the Military Railroads in Virginia, North Carolina, Tennessee and Mississippi during the war between the states. Other articles in the bulletin include a discussion of the railroad in current literature; the famous class P passenger engines of the Pennsylvania; the Chicago tunnel company; an early sleeping car pioneer; a former rail center in the White Mountains: North Conway, New Hampshire; the Junction City-Horton wooden railroad and the Malone shops. Included also is an index to material appearing in bulletins 52-59 inclusive.

Scrap—Additions and Corrections

Following the publication of reports of scrap sold by railroads during the first seven months of the year in the *Railway Age* of October 10, page 566, similar reports have been obtained from the Akron, Canton & Youngstown; the Atchison, Topeka & Santa Fe; the Chicago & North Western; the Chicago, St. Paul, Minneapolis & Omaha; the Missouri-Kansas-Texas and the Southern Pacific System. The figures on the scrap sold by these railroads, together with a corrected statement of sales by the Atlantic Coast Line and the Charleston & Western Carolina, are given in the accompanying table.

Scrap Sold by Railroads

Road	7 Mo. 1942 Value	Inc. over 7 Mo. 1941 %	Inc. over 7 Mo. 1940 %	July 1942 Value	Inc. over July 1941 %
A. C. & Y.	$ 14,573	250	450	$ 4,020	80T
A. C. L.	515,484	16	59	87,068	-11
A. T. & S. F.	966,783	39	46	158,520	-11
Char. & W. Char.	17,831	15	97	813	51
C. & N. W.	972,654*	4	22	141,713†	32
C. St. P. M. & O.	112,648*	55	40	28,449†	44
M-K-T.	234,287	50	76	41,902	65
S. P.	667,722*	4	26	121,367†	54

* 6 Months. † June.

St. Lawrence Project Opponents Suspend Activities

Pointing out that "it seems altogether unlikely that any serious attempt will be made to authorize commencement of construction until after the war" of the St. Lawrence Seaway project, the National St. Lawrence Project Conference has announced that it will suspend its activities for the duration. Its officers and executive committee will continue to function, however, and it will be prepared to resume its active opposition to the project if an attempt is made to incorporate it in a post-war reconstruction program. Tom J. McGrath, executive director of the Conference, will resume the practice of law in Washington, with offices at 729 Fifteenth Street, N. W., but he will continue his association with the Conference.

This decision follows the announcement by President Roosevelt, reported in *Railway Age* of September 19, page 457, that there is little prospect that the project will be undertaken while the war continues. In this connection Congressman Fish, Republican, of New York, spoke in the House of Representatives on October 17 to call attention to the continued support of the project by the Democratic party in New York, and to say that "we must stop every effort to revive this project and further burden our taxpayers and cause financial and trade losses to our merchants and unemployment among our railroad employees when peace is restored."

Club Meetings

The next meeting of the Northwest Car Men's Association will be held at 8 p. m. at the Midway Club, St. Paul, Minn., on November 2. A. T. Cox, Jr., of the Lincoln Electric Railway Sales Co., Chicago, will address the meeting on the subject of "Electric Arc Welding and Its Value to the Railroads."

Bert C. Bertram, Director of Railway Salvage, War Production Board, Washington, D. C., will speak before the Pacific Railway Club at a meeting to be held at the Palace Hotel, San Francisco, Cal., on November 12 at 7:30 p. m. The title of his paper is "How Railroadmen Can Help Scrap the Axis with Scrap." A special feature of the meeting will be a discussion by representatives of various departments of the railways on how the scrap program may be advanced.

The Car Foremen's Association of Omaha, Council Bluffs and South Omaha Interchange, will hold a meeting on November 12 at 1:30 p. m., at Burlington station, Omaha, Nebr., at which a special report of the A. A. R. Committee will be presented.

The Eastern Car Foremen's Association will meet at the Engineers Club, New York, on November 12 at 8:00 p. m. James A. Shafer, of the National Malleable & Steel Castings Co., will address the meeting on the subject of "High Speed Freight Car Trucks."

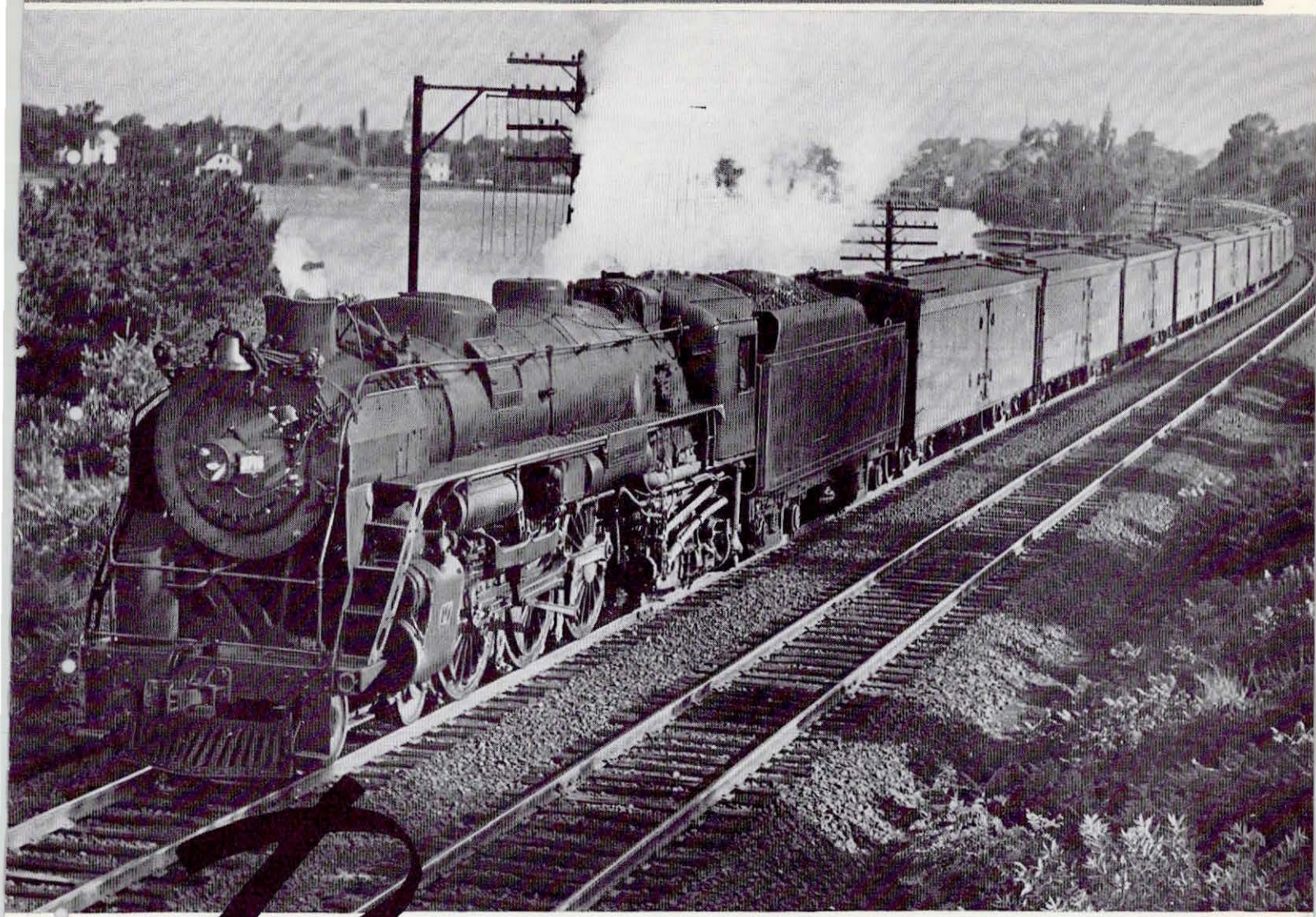
Equipment Installed

Class I railroads during the first nine months of 1942 placed in service a total of 56,081 freight cars and 575 locomotives, according to the Association of American Railroads. New freight cars on order October 1 totaled 36,437, compared with 88,819 on October 1, 1941; while new locomotives on order totaled 840 as compared with 671.

The nine-months total of freight cars installed included 33,617 box, 19,150 coal, 1,634 flat, 608 refrigerator, 100 stock, and 972 miscellaneous cars. The October 1, 1942, total of those on order included 10,927 box, 21,496 coal, 2,347 flat, 800 refrigerator, 200 stock, and 667 miscellaneous cars. The 575 locomotives installed during

News Department continued on next left-hand page

STEAM POWER IS STILL SUPREME



Busy New England

PROVIDES ESSENTIAL WAR TOOLS

New England has for generations been an outstanding producer of machine tools and allied products. And today New England, like all America, is working feverishly to supply a steady, uninterrupted flow of these vital products to war production plants throughout the country.

For many years, the Boston & Maine Railroad, serving the heart of this great manufacturing center, has employed Lima Super-Power Steam Locomotives. Today modern, powerful Pacific Type locomotives built by Lima and operating with maximum efficiency and economy are keeping these vital products rolling from "Busy New England" to the plants producing fighting equipment for our fighting men.

Steam power keeps 'em rolling

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

this year's first nine months included 232 steam and 343 electrics and Diesel-electrics. During the comparable 1941 period, 425 locomotives were installed, including 97 steam and 328 electrics and Diesel-electrics. The 840 locomotives on order October 1 included 314 steam and 526 electrics and Diesel-electrics.

New Burlington Galesburg Yard Put in Service

On October 15, the Chicago, Burlington & Quincy put in service new westbound classification facilities at Galesburg, Ill., these new facilities including a receiving yard, a classification yard and a departure yard, with a total of approximately 55 miles of tracks, and supplementing a more or less similar group of eastbound classifying facilities built in 1930-1932. Work on the new classification facilities, built with the approval of the War Production Board to relieve serious car and locomotive delays at Galesburg, with consequent cumulative delays at other points on the system, and to speed war traffic generally, was started early in June of this year and was rushed to completion. The classification yard, which is of the hump type, has 35 classification tracks holding from 20 to 150 cars each, and is equipped with electro-pneumatic car retarders, power-operated switches, signals, and a loud-speaker system.

Maryland-Virginia Area Floods Disrupt Rail Operations

Normal railroad services in the Maryland-Virginia-West Virginia area were resumed early this week after disruptions caused by last week-end's floods along the Shenandoah, Potomac, Rappahannock, and James rivers. Most of the roads involved were hit on Friday, October 16, after which their prompt and rapid restoration work soon began bringing the affected routes back into service, until all were open by Monday.

The Baltimore & Ohio was perhaps the hardest hit, traffic on its line being first affected on the morning of October 15, by a small slide at Williams, Pa., followed by a small washout at Hyndman, Pa., stopping traffic on all three tracks of the Cumberland Division at that point. On the evening of the 15th, traffic over the Cumberland Division was suspended by high water at Patterson Creek, W. Va., and by slides and washouts between Bond, Md., and Piedmont, W. Va. Operations over the west end of the Cumberland Division between Cumberland, Md., and Grafton, W. Va., were restored on the morning of October 16, but high water on the division's eastern end and on the Baltimore Division between Weverton, Md., and Tuscarora continued to cause trouble until about 1:00 a. m. on October 18.

Meanwhile the Interstate Commerce Commission on October 16 issued Service Order No. 90 authorizing and directing the B. & O. to disregard routings and forward by the most available open routes cars which had been routed via its line between Cumberland, Md., and Brunswick. During the period of its tie-up, the B. & O. diverted approximately 3,800 cars of eastbound freight via the New York Central and Pennsylvania at Clearfield, Pa., and Williamsport, via the P. R. R. at Bessemer, Pa., Cincinnati, Ohio, and Columbus, and via the Western Maryland at Cumberland and Cherry Run. About 250 cars of westbound freight from Philadelphia, Pa., and New York were moved out of route via the Reading, and 175 cars westbound from Baltimore, Md., went via the W. M. To maintain the movement of westbound empty tank cars, the B. & O. diverted some 1,900 such cars via the Pennsylvania. In the Washington, D. C., area the B. & O.'s industrial line serving the Georgetown waterfront was inundated by the Potomac floods.

Southbound train service out of Washington was halted between 2:00 a.m. and 7:45 a.m. on October 17 when the railroad bridge spanning the Potomac was closed as a precautionary measure. The same service was more seriously affected as a result of washouts which tied up the Richmond, Fredericksburg & Potomac's line at Fredericksburg, Va. By Saturday, the R. F. & P. had a single track open for the handling of passenger trains; and by 3:00 p.m. on Sunday it got a double track through and resumed the handling of freight trains.

Aside from the effect of the closing of the Potomac river bridge on its service out of Washington, the Southern's main line was inundated in the vicinity of the Rappahannock River bridge near Remington, Va., 56 miles south of Washington. The whole situation resulted in a 14-hour tie-up (from 9:00 p.m. on October 15 until 11:00 a.m. on the 16th) in service on this road's Washington Division; it was the first line to resume southbound operations out of the Capital. The Rappahannock bridge suffered little damage and the track and roadbed at other nearby places were quickly repaired. Meantime, the Southern's Harrisonburg branch had suffered some damage from high water.

The Chesapeake & Ohio lines were affected between Charlottesville, Va., and Clifton Forge, while the Norfolk & Western encountered some washouts and high water between Roanoke, Va., and Hagerstown, Md. During the October 15-19 period the C. & O. detoured 66 trains over the Southern between Orange, Va., Charlottesville, and Lynchburg.

Mechanical Division Letter Ballot Results

As a result of a favorable letter ballot, 11 specific recommendations for changes in the standards and recommended practices of the A. A. R. have been approved effective immediately. These recommendations include the following proposals: (1) to modify the braking ratio for freight cars; (2) to increase the dimension defining the maximum height of steam heat couplers above the center line, as shown on page E-78-1942 of the Manual; (3) to adopt new specifications M-914-brake cylinder lubricant; (4) to advance to standard the present recommended practice testing device for air brake hose couplings and instructions for its use, and make same mandatory for use in testing hose couplers before being mounted on hose; (5) to modify autogenous welding limits and regulations; (6) to modify the specifications for geared hand brakes; (7) to revise recommended practice designs of lightweight pistons; (8) to adopt standard brake shoes and wheels for use on Diesel electric switching locomotives; (9) to modify Sec. 10(a) of the standard method of packing journal boxes; (10) to revise definitions and designating letters for tank cars; (11) to revise Sec. VI—marking of specifications M-123-41.

The first four propositions were advanced by the Committee on Brakes and Brake Equipment; Nos. 7 and 8 by the Committee on Locomotive Construction and each of the others by the particular committee interested. All propositions were approved by the General committee before being submitted to letter ballot in a circular dated September 5, 1942.

Administration Reports Lower Non-War Expenditures

A report prepared by the Bureau of the Budget, entitled "Trends in Non-War Federal Expenditures, Fiscal Years 1932-1943," was transmitted to Congress by President Roosevelt on October 16. In it the Bureau has analyzed the upward trend of total non-war expenditures through 1939, the reduction that has occurred since that year, and the developments within the major activities of the government that have been the basis of these trends,—all with the purpose, the report indicates, of providing a factual background for an informed public opinion on this question, which has attracted the attention of individuals, of newspapers and magazines, and of Congressional committees.

The survey begins with a summary of total federal expenditures each year under the "New Deal," broken down to separate war and non-war items. The latter are further broken down to distinguish between services in effect before 1932 and those instituted since that time (of which the most important are social security, agricultural adjustment, unemployment relief, and railroad retirement). These figures indicate that while total expenditures (war and non-war) have increased from about $4,535,000,000 in 1932 to an estimated $80,044,000,000 for the fiscal year 1943, expenses for pre-1932 non-war activities have decreased from $3,139,000,000 in 1932 to an estimated $2,225,000,000 for the 1943 fiscal year. Expenses for non-war activities begun since 1932 will amount to about $1,969,000,000 in the fiscal year 1943, it is estimated. In 1939 this form of expenditure amounted to some $3,916,000,000.

Magazine Men Told Carriers Should Hire Women

That man power is clearly becoming more critical was revealed by William Edward Hayes of the Information division of the Office of Defense Transportation, before the annual meeting of the American Railway Magazine Editors Association at Louisville, Ky., on October 15 and 16. The program of the meeting, over which President J. L. James, assistant edi-

tor of the Louisville & Nashville employees' magazine, presided, was devoted to the discussion of our war efforts and included addresses by Mr. Hayes; B. C. Bertram, director of railroad salvage of the War Production Board; and by representatives of the Treasury, and the Army. Officers elected for the ensuing year are as follows: President, Ernest Black, assistant editor of the Reading-Jersey Central magazine; first vice-president, R. R. Horner, editor of the Norfolk & Western magazine; second vice-president, Marc Green, editor of the Milwaukee magazine, and secretary, Page N. Price, assistant editor of the Norfolk & Western magazine.

"It is certain," Mr. Hayes said, "that in order to meet the personnel problem, large numbers of women will have to be employed. ODT accordingly has drawn up a preliminary list of railroad occupations which are suitable for women. These include car cleaners in coach and freight yards, cleaners in stations and offices, clerks of all sorts with the exception of yard clerks, claim investigators, crossing watchmen or crossing flagmen, information bureau attendants, photographers, photostatic operators, telephoners, telegraphers, ticket examiners, ticket collectors, time keepers, crew dispatchers, engine dispatchers, dining car employees, riveters, station agents, steam-hammer operators, switch tenders, welders. Your magazines may be called upon from time to time to give us some help in acquainting the old timers on the jobs with the new responsibility they have in helping to teach the young recruit everything they can about the job he or she is called upon to perform."

Freight Levy in Tax Bill's Final Version

A tax of three per cent on amounts paid for transportation of property, except in the case of coal where the rate is four cents per short ton, is included in the final version of the new tax bill which was enacted by Congress and signed by President Roosevelt this week. Congressional action was completed on October 19 when both House and Senate adopted the conference report.

The restored freight tax is on a lower basis than originally proposed, the bill as passed by the House having put it at five per cent and five cents a ton on coal. This was eliminated entirely by the Senate, but Chairman George of the Senate committee on finance told the Senate that the House conferees "strongly insisted on their position," and thus the Senate conferees, despite their unanimous view that "the tax should not be imposed," were forced to accept the lower-rate compromise.

Other provisions of particular interest to railroads remained in the final version as they were reported by the Senate committee on finance (see *Railway Age* of October 10, page 583) and passed by the Senate. Such provisions include the increase from five to 10 per cent in the tax on amounts paid for passenger transportation; and those relating to the acquisition by railroads of their own securities and the tax base of a reorganized company.

While the debate on the conference report was brief, it did include some complaints about the restoration of the freight tax. Minority Senate Leader McNary, Republican of Oregon, was "disappointed" since he thinks the tax will "work a very great hardship" upon western timber interest because of the distance to eastern markets. Senator Thomas, Republican of Idaho, predicted that when the Senate is writing the next tax bill, the reaction against the freight tax will have crystalized a movement for its repeal. He also recalled that the tax had been opposed by Administrator Henderson of the Office of Price Administration.

Construction

More Protection Ordered at 600 Grade Crossings in N. Y. State

The New York State Public Service Commission has ordered 44 railroads operating in the state of New York to install additional protection at more than 600 grade crossings. All of these crossings are now protected by gates or watchmen, but the commission states that its investigations of last winter and spring showed that the existing protection is inadequate and that additional safeguards are needed to afford greater safety to the public. The additional installations ordered are of three types: one, annunciator bells at crossings protected by gates or watchmen to warn watchmen of approaching trains; two, red lens electric bullseye lights on gate arms; three, flashing light signals. At some of the crossings only one of the foregoing forms of additional protection will be required, while at others it will be necessary to install one or more of the types prescribed. There are 200 other crossings which fall into the classes reported as needing more protection, but these crossings are slated for elimination and no additional installations were ordered.

The commission's records show that between 1929 and 1939, when hundreds of dangerous grade crossings were eliminated, accidents at crossings fell from 924 in 1929 to 358 in 1939, and the number of killed declined from 192 to 55, a decrease of about 70 per cent, but that in the last two years there has been an increase in such accidents and fatalities. Alarmed by this reversal of the accident trend, the commission instituted a proceeding in February, 1942, to determine what should be done to afford the public greater protection at crossings in view of the fact that many important elimination projects ordered by the commission cannot progress because of war priorities on construction materials. The commission's investigation and testimony submitted by the railroads and hearings in the matter showed that the 44 railroads involved in the proceeding have a total of 6,041 crossings in the state outside of New York City. Many of these crossings have protection of various types, and there are over 3,000 crossings which are protected only by crossing signs.

Because the War Production Board has forbidden the use of all materials and labor on construction not essential to the prosecution of the war, the work of installation of the additional protection ordered cannot be undertaken immediately, and for this reason the commission's order directs that construction shall begin on January 1, 1944, and that at least 25 per cent of the installations ordered shall be completed by the railroads in each succeeding six months' period, so that all the work shall be completed by January 1, 1946.

CENTRAL OF NEW JERSEY.—This railroad has awarded a contract for the rebuilding of ferry fenders at Jersey City, N. J., at estimated cost of $42,189, to Spearin, Preston & Burrows, Inc., of New York.

DELAWARE & HUDSON.—This railroad has awarded a contract for extending 13 stalls of its engine house at Oneonta, N. Y., at estimated cost of $60,000, to the Oneonta Contracting Company.

ERIE.—Three construction projects, each of which will cost more than $20,000, have been authorized by the Erie as follows: Construct a retaining wall at Long Eddy, N. Y.; provide a coupler repair shop at the scrap reclamation plant, Meadville, Pa.; and reconstruct bridges 42.11 and 46.45 on the Wyoming division. The total estimated cost of this construction work is $132,750.

NEW YORK, NEW HAVEN & HARTFORD.—This railroad has undertaken the construction of additional track facilities at its Oak Point yard in New York at estimated cost of $172,000. The work is being carried out by the railroad's own forces.

NORTHERN ALBERTA.—This road plans to construct a 60-ton mechanical locomotive coaling station at Rycroft, Alta., and a 60-ton locomotive coaling station at Dawson Creek, B. C.

TEXAS MEXICAN.—This road is constructing an engine house and shop 40 ft. by 100 ft. by 22 ft. high, of concrete and second hand brick at Corpus Christi, Tex. The engine house will have a drop pit and be equipped to make light repairs.

UNION PACIFIC.—A contract has been awarded the Utah Construction Company for grading extensions to passing tracks in connection with the installation of centralized traffic control between Las Vegas, Nev., and Daggett, Cal. The estimated cost of this work is about $44,000.

UNION PACIFIC.—Two contracts have recently been awarded the Morrison-Knudsen Company for work on two line changes; one for grading around a tunnel on the Idaho division about nine miles east of Boise, Idaho, and the other for grading around a tunnel on the Wyoming division, 65 miles east of Ogden, Utah. The work near Boise will cost about $128,000 and that near Ogden about $222,500.

UNION PACIFIC.—A contract amounting to about $31,000 has been awarded the F. W. Miller Heating Company for the installation of direct steaming equipment in the roundhouse at Green River, Wyo. The work covers the installation of special heat exchangers and necessary pipe in the blow-down and fill-up lines, using live steam from the power plant to raise the temperature of fill-up water to 230 to 340 deg. F., depending upon the velocity of the water supply and the pressure of steam.

News Department continued on second left-hand page

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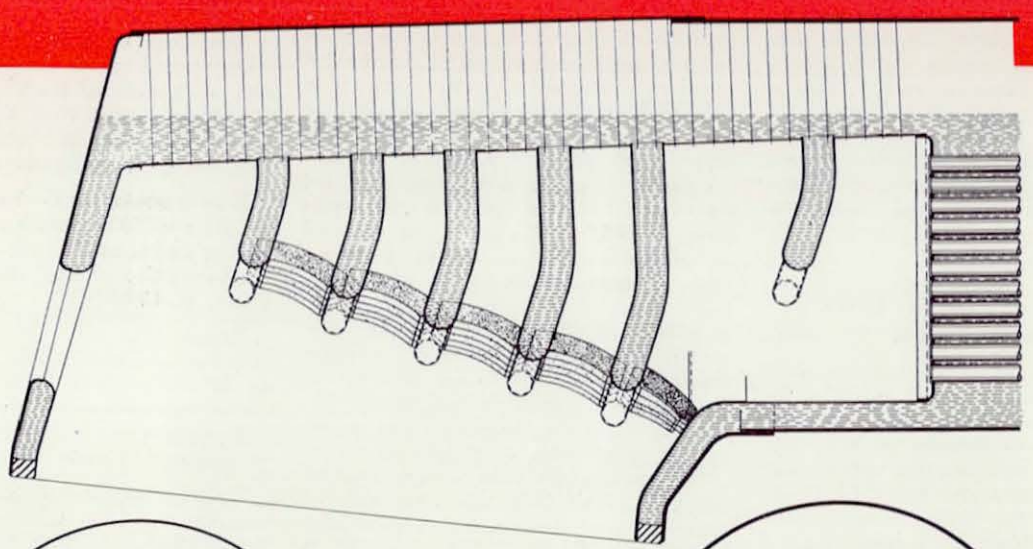
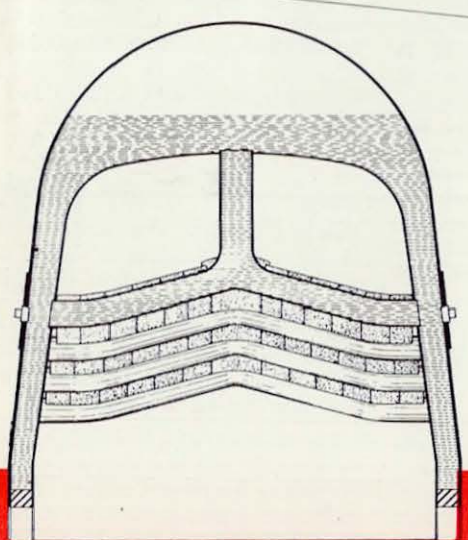
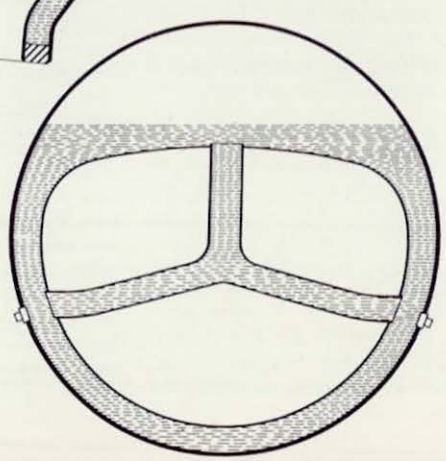
SECURITY





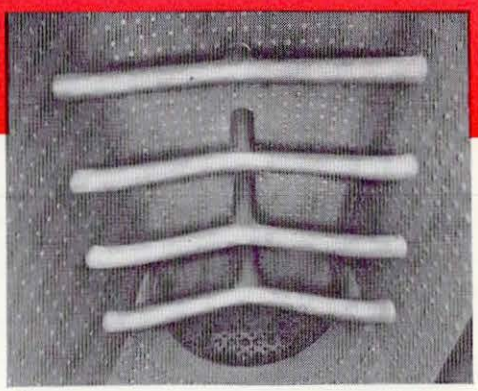


AMERICAN

NEW YORK CHICAGO

ordered since January 1, 1942

CIRCULATORS

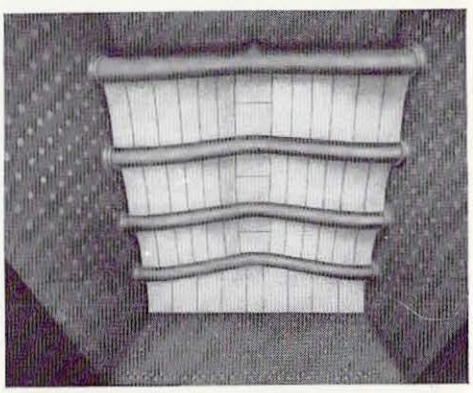


Positioning of Security Circulators in an average size of locomotive firebox.

In the first eight months of 1942, American railroads ordered more Circulators than were installed during the previous six years. This is graphic evidence of the railroads' approval of the Security Circulator.

The excellent performance of the Security Circulators that were installed on locomotives during the last six years is responsible for the trend towards Security Circulators.

As the Security Circulator is adaptable to any type of locomotive you can improve the efficiency and decrease the maintenance of your old, as well as your new, locomotives.



Typical Security Circulator and brick Arch Installation in a locomotive firebox.

ARCH COMPANY, INC.

Security Circulator Division

Supply Trade

A. G. York, vice-president in charge of sales of the **Watson-Stillman Company,** Roselle, N. J., has been appointed a member of the valves and fittings committee of the War Production Board.

Edward G. Budd, president of the **Budd Wheel Company,** and representatives of the company's employees, headed by John Hudson, president of Local 306 UAW-CIO, were presented with the Army and Navy "E" award for high achievement in producing war materials on October 12. The presentation ceremonies, which were witnessed by more than 6,000 including many of the company's employees and their families, were held in the yard of the company's plant at Detroit, Mich.

The International Nickel Company plant at Huntington, West Va., won its third war production award when it received the Army-Navy "E" pennant with two stars. Previously the works had received the Naval Ordnance award, later followed by renewal in the form of the All-Navy "E" award with one star. The plant is among the first 25 throughout the nation, and the first in the fifth naval district, to win the two-starred Army-Navy "E" pennant. Each star represents the renewal of production honors for a six months' period. The original award was for a 12-month period.

The Army-Navy award for high achievement in the production of war equipment was presented to the **Edgewater Steel Company,** at Oakmont, Pa., on October 1. The award flag was presented by Capt. Frederick L. Oliver of the United States Navy, and was received by Davitt S. Bell. Brig. Gen. Hugh C. Minton, representing the United States Army, presented award pins to the employees. Token awards were also received by Miss Marianne Armstrong, the woman employee with the longest service record; E. E. Price, the oldest employee in the company; and Joseph Hays, the employee with the longest record of employment.

George M. Cooper has been transferred to the western sales department of the Brake Shoe and Castings and Wheel division of the **American Brake Shoe & Foundry Co.,** with headquarters at Houston, Texas. Mr. Cooper began his career with the American Brake Shoe & Foundry Co. in 1918 as an office boy in the Ramapo Iron Works, now a part of the Ramapo Ajax division. From January, 1921, to December, 1922, he was secretary to the president of the Ramapo company. In December, 1922, he was transferred to the export department, where he served until April, 1925. He was then transferred to the sales department, where he remained until his recent transfer.

In the interest of furthering the war effort, the **Carnegie-Illinois Steel Corporation,** a subsidiary of the United States Steel Corporation, has announced a program of cash awards for suggestions advanced by employees, which result in furthering production. The program will be conducted by the various war production drive committees established in each of the Carnegie-Illinois plants. Suggestions boxes will be provided by the committees throughout the mills and offices into which all suggestions will be deposited. For each suggestion accepted, the employee will receive an award of $10. The program is retroactive to the time of establishment of the production drive committees and provides for the payment of the award to each employee whose suggestion has been accepted.

The Caterpillar Tractor Company, Peoria, Ill., has sponsored a corps of engineers heavy shop company, composed chiefly of skilled men from the company's Peoria plant, which is now in training for active service. In command of the shop company, which consists of 199 officers and men, most of whom will become noncommissioned officers or technicians, is Captain Jean Walker, formerly export representative for Caterpillar. The shop company volunteers left Peoria in a body with appropriate farewell ceremonies, witnessed in the heart of the city by thousands of persons who gathered to pay tribute. Included among the speakers were Colonel M. M. Dawson, chief, requirements, storage and issue branch supply division, corps of engineers, Washington, D. C., and L. B. Neumiller, president of the Caterpillar Tractor Company. The Caterpillar company is reported to be the first equipment manufacturer to respond to the call of the engineers for an organization comprised of skilled man power to keep the machinery of the engineers rolling.

OBITUARY

George C. Isbester, who died on October 10, as reported in the *Railway Age* of October 17, was born at Niagara Falls, N. Y., on June 9, 1878. He entered the railway field in 1899 in the mechanical department of the Great Northern. From 1908 to 1913 he was in charge of the Chi-

George C. Isbester

cago office of the Q. & C. Co., and in 1917 entered the Navy as a captain. He served as aide to Admiral Moffett at Great Lakes, Ill., and later to Admiral Sims at London, England. After the war, he was associated with the American Chain Company and the Brown-Isbester Company. In 1933, he became railroad sales manager of the Yale & Towne Mfg. Co., which position he was holding at the time of his death.

Martin J. Wolf, vice-president of Luminator, Inc., of Chicago, died September 25 as the result of an accident in Detroit, Mich.

Charles Ervin, recently retired traffic manager of the Texas Company, died at his home, Jacksonville, Texas, on October 14. He was 62 years of age.

R. W. Burnett, president of the Ajax Hand Brake Company, Chicago, who died in that city on October 13, as reported in the *Railway Age* of October 17, was born at Farmer City, Ill., in 1868 and entered railway service in 1890 in the car department of the Union Pacific at Denver, Colo. In 1892, he entered the employ of the Pennsylvania as a car inspector at Chicago, and from August, 1892, to July, 1899, was successively foreman and general foreman of the car department of the Lake Shore & Michigan Southern (now N. Y. C.) at Chicago. During the early part of 1900 he was employed as general foreman of the car department of the Long Island, and in the latter part of the year as general foreman of the car department of the Central of New Jersey at Elizabeth, N. J. From 1904 to January, 1907, he was successively assistant master car builder and master car builder of the Erie at Meadville, Pa., and on the latter date became assistant master car builder of the Canadian Pacific. He was promoted to general master car builder in 1909 and resigned in 1915 to become vice-president of the National Car Equipment Company. He returned to railway service on September 1, 1917, as master car builder of the Delaware & Hudson and in 1919 resigned to become assistant to the general manager of the Joliet Railway Supply Company and vice-president of the National Car Equipment Company, with headquarters at Chicago. In 1926, he became president of the Ajax Hand Brake Company.

R. W. Burnett

TRADE PUBLICATIONS

UNIT HEATER.—Bulletin B-2, recently issued by the Wilson Engineering Corporation, Chicago, presents a concise, well il-

News Department continued on next left-hand page

HEAVIER LOADS AND HIGHER SPEEDS

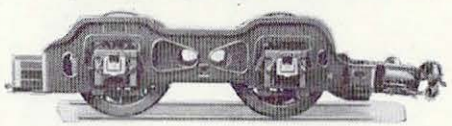
from existing locomotives

The war has placed a tremendous load on the railroads. At the same time it has eliminated new power; therefore, they must increase the capacity of existing power to meet war time demands.

The solution — the Franklin System of Steam Distribution and the Locomotive Booster.*

They are easily applied and provide increased capacity, greater power and higher speeds.

THE FRANKLIN SYSTEM OF Steam Distribution AND THE LOCOMOTIVE BOOSTER



*Trade Mark Registered U. S. Patent Office

FRANKLIN RAILWAY SUPPLY COMPANY, INC. NEW YORK CHICAGO

In Canada: **FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL**

lustrated description of the Wilson unit heater, now constructed with a non-critical all-cast-iron core in place of war-critical aluminum and copper and used in railway shops, engine terminals, storehouses, etc. Specification drawings in the new 4-page bulletin show the dimensions and capacities of the various sizes of Wilson unit heater which are available. The last page of the bulletin illustrates the Wilson cast-grid radiation elements used for cooling and de-humidifying compressed air on locomotives.

Equipment and Supplies

LOCOMOTIVES

Correction

The New York Central was incorrectly reported in the *Railway Age* of October 17 as having ordered 25 steam locomotives of 4-8-2 wheel arrangement from the Lima Locomotive Works. An inquiry for these locomotives was issued in September and the railroad reports that no order has yet been placed. The New York Central placed an order for 25 heavy freight locomotives of this type from the Lima Locomotive Works in February of this year, on which it expects deliveries to begin in November and to be completed in December.

IRON & STEEL

THE DELAWARE & HUDSON has placed an order for 14,080 gross tons of rail with the Bethlehem Steel Company.

The INTERNATIONAL RAILWAY COMPANY, Buffalo, N. Y., is inviting proposals for the purchase and removal of 20 bridge spans now in place on its right-of-way between Buffalo and Niagara Falls. These include 14 through-girder bridges with spans ranging from 56 ft. to 111 ft.; two deck girder bridges of 38 ft. and 59 ft.; and four through-riveted truss spans ranging from 142 ft. to 176 ft. The bridges, which are reported to be adaptable to maximum highway loadings now in use, were manufactured by the American Bridge Company in 1916 and 1917 and were erected during those years by the Pittsburgh Construction Company. The bridges are so located that upon dismantling they can be readily trucked to railroad loading points.

SIGNALING

THE CANADIAN NATIONAL has placed an order with the General Railway Signal Company for an all-relay electric interlocking system to control 12 crossovers, 7 single switches, 4 switch locks, 2 derails, and 79 signals at St. Lambert, Que. The order calls for a control machine having a panel 22 in. high and 96 in. long, carrying 23 switch and lock levers, 41 signal and traffic control levers and 11 miscellaneous levers and pushbuttons for maintainer call, light dimming, etc. Included in the order are 19 Model 5C switch machines, 12 Model 5D, 79 Type SA color light signals, 10 Type W fixed signals, 3 housings and 27 instrument cases. Type B plug-in relays are used throughout, racks being prewired in the housings and for the tower. Installation will be handled by the signal company's forces.

THE MISSOURI PACIFIC has placed an order with the General Railway Signal Company for block signaling materials to be installed on 78 miles of single track between Greenwood Junction and Wagoner, Okla. The order includes 119 signals of Type D, G and L and 125 prewired cases housing the wayside equipment, Type K relays, transformers, and copper-oxide rectifiers.

THE MISSOURI PACIFIC has placed an order with the General Railway Signal Company for block signaling materials to be installed on 33 miles of single track between Jefferson Barracks and DeSoto, Mo. The order includes 40 Type D signals and 24 pre-wired instrument cases housing Type K relays, transformers, and copper-oxide rectifiers.

THE PACIFIC ELECTRIC has placed an order with the Union Switch & Signal Co. for necessary materials for interlocking, automatic block signaling, and highway crossing protection on its Terminal Island extension line. The interlocking at Vreeland avenue junction, on the Long Beach-Wilmington line, will be operated from a 22-lever centralized traffic control machine, using style M-22-A electric switch movements, while searchlight signals will be employed throughout the entire interlocking and block signaling territory. Electric switch locks and light type switch indicators are included in the order, along with the necessary relays, transformers, switch boxes, and factory-wired instrument houses. The field installation work will be carried out by the railway company's regular signal construction forces.

THE LOUISVILLE & NASHVILLE has placed orders with the General Railway Signal Company for centralized traffic control equipment to be installed on a total of 167 miles of single track in two sections. The first section comprises 55 miles between Three Mile Creek and Miles, Ala., controlled from Mobile. The second section comprises 112 miles between Welka and Catoma, Ala., controlled from Georgiana. The two sections are separated by 4 miles of double track through Flomaton which does not come under the control of the C. T. C. The control machine for Mobile has 45 working levers for the control of 16 switches and 77 signals; and the one for Georgiana has 86 working levers for the control of 32 switches and 150 signals. Both machines will be equipped with all-electric train recorders. In addition to the control machines and coding equipment, the order calls for Model 5D dual-control switch machines, Type SA signals, outlying electric switch locks, and factory-wired instrument cases and housings. Field work will be done by the railroad's forces.

Financial

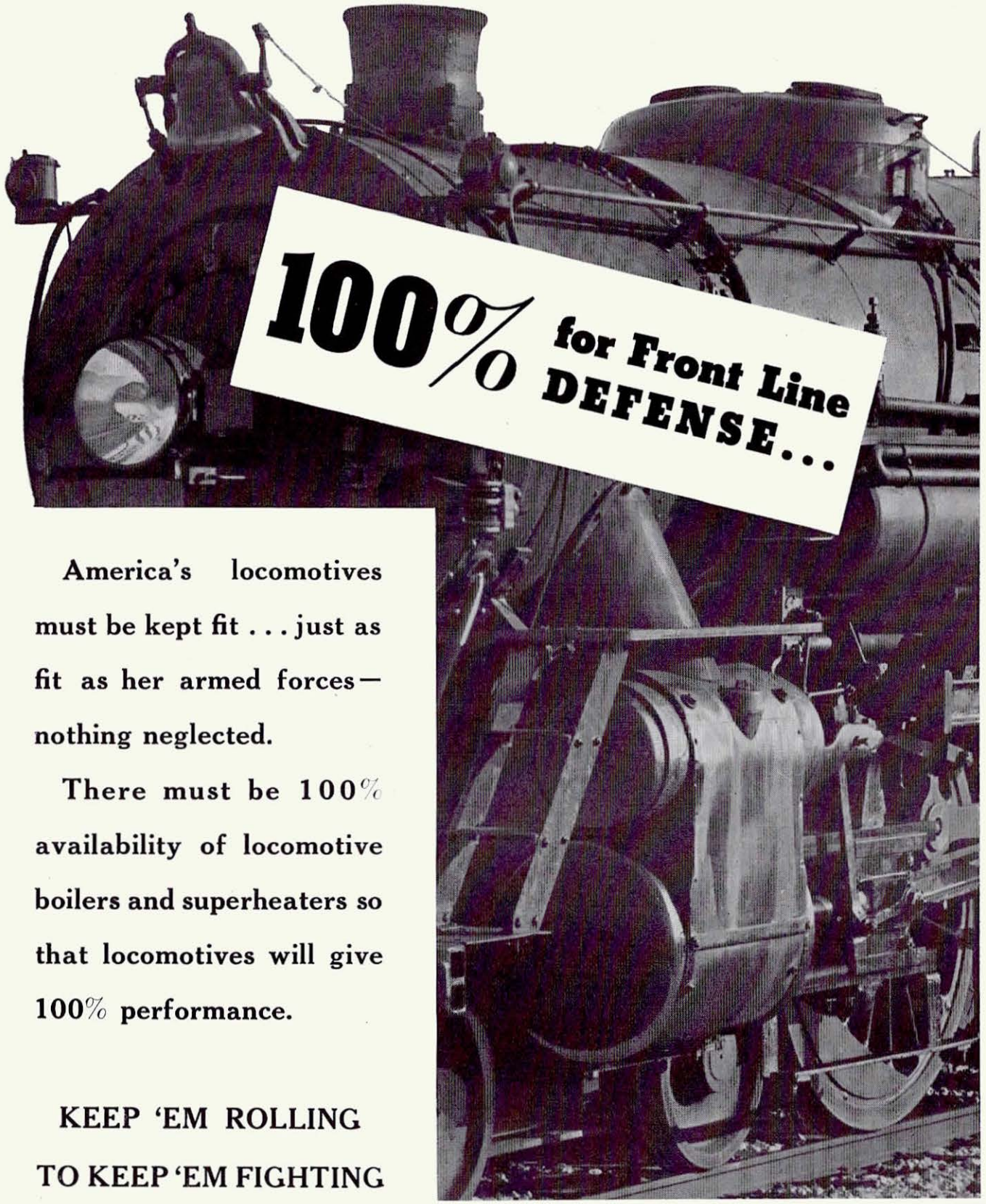
ALTON.—*New Director.*—Hayward Niedringhaus, president of the Granite City (Ill.) Steel Company, has been elected a director to fill the vacancy caused by the death of Daniel Willard.

CENTRAL OF NEW JERSEY.—*Decisions on Tax Appeals Are Reserved.*—The New Jersey State Board of Tax Appeals on October 15 reserved decision on an appeal filed by this railroad for a reduction in the valuation placed on its properties for the current year. The Circuit Court of Appeals on October 12 denied the railroad's motion to dismiss an appeal by the State of New Jersey of a recent ruling of the United States district court at Camden, N. J., that the railroad, which is undergoing reorganization in the latter court, is liable for about $13,000,000 principal amount of taxes for years 1930-1942, but not for $10,000,000 in interest on that principal. The State's claim for interest was not included in the Camden court's ruling which held that 1941 legislation, which provided for payment of railroad tax balances as of December 1, 1940, without interest payments to that date, was constitutional. The Circuit Court held that if the tax laws are declared unconstitutional in a test now pending in the New Jersey courts, it will at that time decide whether the railroad is liable for the $10,000,000 in interest.

COLORADO & SOUTHERN.—*To Pay Interest on General Mortgage Bonds.*—The Colorado & Southern will pay, on November 1, interest amounting to $19.17 per $1,000 principal amount to holders of its general mortgage 4½ per cent bonds, series A, due 1980, and to holders of certificates of deposit representing these bonds. The payment represents fixed interest at the rate of 1½ per cent per annum for the year ending November 1, 1942, and contingent interest at the rate of 2½ per cent per annum for the period November 1, 1941, to December 31, 1941. The interest payment is in accordance with the railroad's voluntary plan of adjustment for extension of maturities and modification of interest charges which it has presented to its bondholders which it will endeavor to effectuate by proceedings under the new McLaughlin Act. Payment of interest is tendered to all holders of the general mortgage bonds whether or not they have assented to the plan and without prejudice to existing rights of the bondholders, including the right to interest at the full coupon rate in the event that the plan does not become effective. Acceptance of the payment tendered November 1 by bondholders who have not assented to the plan will not constitute an acceptance of, or assent to, the plan.

DELAWARE & HUDSON.—*Dividends to Albany & Susquehanna Reduced to Pay Taxes.*—The Delaware & Hudson has received federal court authorization to pay part of the federal corporate income taxes of the Albany & Susquehanna out of $315,000 in cash dividends heretofore paid annually directly to A. & S. stockholders.

News Department continued on next left-hand page



100% for Front Line DEFENSE...

America's locomotives must be kept fit . . . just as fit as her armed forces—nothing neglected.

There must be 100% availability of locomotive boilers and superheaters so that locomotives will give 100% performance.

KEEP 'EM ROLLING

TO KEEP 'EM FIGHTING

A-1533

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SUPERHEATERS • • FEEDWATER HEATERS
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Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd St., NEW YORK • 122 S. Michigan Blvd., CHICAGO
Montreal, Canada: THE SUPERHEATER COMPANY, LTD.

For use of 142 miles of the Susquehanna's track between Albany, N. Y., and Binghamton, the D. & H. pays each year $120,750 directly to the railroad, $350,000 interest on bonds of the Susquehanna and $315,000 in dividends to the railroad's stockholders. The Albany & Susquehanna, out of the $120,750 received directly, pays federal taxes on that sum, plus the $315,000 paid to its stockholders, which is considered part of its income for tax purposes. The suit had been brought by the A. & S., which alleged that current taxes amounting to $134,000 on 1941 income and an estimated $196,000 for 1942 exceeded the amount received directly by the railroad from the D. & H.

FLORIDA EAST COAST.—*Plan of Reorganization Opposed.*—Objections to the plan of reorganization of this railroad approved by the Interstate Commerce Commission are reported to have been filed with the United States district court at Jacksonville, Fla., by all the major groups of bondholders. Objections were made to the appointment of three reorganization managers, which is stated to be unnecessary, and to the make up and the limiting of the new capitalization to $37,000,000.

FLORIDA EAST COAST.—*Tax Exemption of Unpaid Interest Is Questioned.*—The United States internal revenue bureau recently inaugurated an inquiry to determine whether the Florida East Coast should pay income taxes for the past several years on unpaid interest accrued which the railroad has deducted annually in its tax returns. With the current rise in railroad earnings, removal of this deduction on income tax returns would have an appreciable effect on the tax payments of railroads which have been in default on interest payments.

HUTCHINSON & NORTHERN.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized this road to purchase and operate a part of the Arkansas Valley approximately one mile in length which connects two segments of the applicant's line. The line to be purchased extends from Carey Lake, Kans., to the mine of the Carey Salt Co., and is part of the line of the Arkansas Valley which the Commission has authorized that company to abandon and which the War Production Board has requisitioned for use elsewhere. The applicant has informed the commission that the W. P. B. will amend its requisition to permit it to purchase the segment covered by this authorization.

NEW YORK CENTRAL.—*Purchase of Stock of St. Joseph, South Bend & Southern.*—Holders of the required number of shares have accepted the offer of the New York Central to purchase the preferred and common stocks of the St. Joseph, South Bend and Southern and the offer ($100 a share for the preferred and $22.50 a share for the common) has been declared effective.

PITTSBURGH, LISBON & WESTERN.—*Acquisition.*—The Interstate Commerce Commission, in Finance Docket No. 13496, has granted this road conditional authority to purchase and operate a line of the Youngstown & Suburban which extends from Signal, Ohio, to Columbiana, approximately 6.5 miles. Both railroads are controlled by the Pittsburgh Coal Company. The application was opposed by the Pennsylvania, Baltimore & Ohio, and Pittsburgh & Lake Erie. Opponents contended that this authorization will make effective a new through north and south route from the Ohio River to the Youngstown district, embracing new lines built since 1929 in spite of a denial by the commission of authority to construct such lines. A complaint against the Youngstown & Suburban was filed by the commission in the United States District Court in December, 1938, to determine the right of that railroad to operate the line from Signal to Columbiana which it constructed without authorization from the commission, and that suit is still pending. The commission, however, has decided that the public interest will be furthered by its approval of the acquisition of this line by the Pittsburgh, Lisbon & Western, and grants such authority under the condition that that road shall also acquire a line from Smith's Ferry, Pa., to Negley, Ohio, which was built as a private spur track by the Pittsburgh Coal Company, and which in conjunction with the applicant's existing line and its connection with the Youngstown & Suburban forms a through line between Smith's Ferry and Youngstown.

Authority was granted this road at the same time to issue an unsecured negotiable promissory note in the amount of not more than $378,000 to effect the purchase of the line from Signal to Columbiana.

ST. LOUIS-SAN FRANCISCO.—*Court Authorizes Bond Payments.*—The United States district court at St. Louis, Mo., on October 14 authorized this railroad to pay the face amount of outstanding general mortgage 4 per cent bonds and income 5 per cent bonds of the Kansas City, Memphis and Birmingham with accrued and unpaid interest thereon at the rate of 4 per cent on the general mortgage bonds and 5 per cent on the income bonds to November 6, the date of payment.

SEABOARD AIR LINE.—*Invites Tenders on Lessor Bonds.*—The Seaboard Air Line has issued a call for tenders, on or before November 5, 1942, at the New York Trust Company, agent for the railroad, of bonds and certificates of deposit for bonds aggregating approximately $32,000,000 principal amount of the following five issues of lessor lines: Georgia & Alabama Terminal, first mortgage 5 per cent bonds, due December 1, 1948; Georgia, Florida & Alabama, first mortgage and refunding 6 per cent bonds, due August 1, 1952; Seaboard-All Florida, first mortgage 6 per cent bonds, series A and series B, matured August 1, 1935; Tampa & Gulf Coast, first mortgage 5 per cent bonds, due April 1, 1953; and Tampa Northern, first mortgage 5 per cent bonds, matured July 1, 1936. Acceptance or rejection of the tenders will be determined at a hearing in the United States district court at Norfolk, Va., on November 12. In submitting tenders, holders are required to certify whether the bonds or certificates were acquired subsequent to October 14, 1492, so that such facts will be available to the court in determining which, if any, tenders will be accepted. Notice of the acceptance or rejection of tenders will be mailed not later than November 18, 1942.

SOUTHERN PACIFIC.—*Declares Common Dividend.*—The Southern Pacific has declared a common stock dividend of $1 per share payable December 21. This is the first common stock disbursement by this railroad since 1932. From 1908 through 1931, an annual common stock dividend of $6 per share was paid.

Average Prices Stocks and Bonds

	Oct. 20	Last week	Last year
Average price of 20 representative railway stocks..	29.75	30.07	28.92
Average price of 20 representative railway bonds..	68.28	68.79	65.06

Dividends Declared

Southern Pacific Company.—(Resumed) $1.00, payable December 21 to holders of record November 21.

Western Maryland.—7 Per Cent First Preferred, $7.00 payable November 20 to holders of record October 31.

Wheeling & Lake Erie.—5½ Per Cent Preferred, $1.38, quarterly; 4 Per Cent Prior Lien, $1.00, quarterly, both payable November 1 to holders of record October 26.

Abandonments

BOSTON & MAINE.—Authority has been granted by Division 4 of the Interstate Commerce Commission to the Concord & Claremont to abandon, and to the Boston & Maine to abandon operation of, a line from Hillsborough, N. H., to Emerson station, approximately 4.6 miles. Similar authority has been granted the Peterborough & Hillsborough to abandon, and the Boston & Maine to abandon operation of, a line from Peterborough, N. H., to Elmwood station, about 6.5 miles.

CHICAGO, ATTICA & SOUTHERN.—Acting at the direction of the court, the receiver for this road has applied to the Interstate Commerce Commission for authority to abandon its entire line totaling approximately 139 miles and extending from La Crosse, Ind., to West Melcher, and from Perry Junction, Ind., to State Line Junction. The line has been operating in freight service only.

CHICAGO, BURLINGTON & QUINCY.—Permission has been granted this company to abandon two branch lines in Nebraska, one extending from Superior to Nelson, approximately 13 miles, and one extending from Benedict to Stromsburg, approximately 7.1 miles, by Division 4 of the Interstate Commerce Commission, which, however, has reserved jurisdiction to consider the rights of labor which may be adversely affected.

CHICAGO & EASTERN ILLINOIS.—This road has applied to the Interstate Commerce Commission for authority to abandon a 1.46-mile section of its Sullivan County branch in Sullivan County, Ind.

CHICAGO, ROCK ISLAND & PACIFIC.—Authority has been granted this road by Division 4 of the Interstate Commerce

Commission to abandon its branch from Atlantic, Iowa, to Griswold, 14.7 miles.

COLORADO & SOUTHERN.—Authority has been granted this road by the Interstate Commerce Commission, Division 4, to abandon its narrow-gage branch line from Chatfield, Colo., to South Platte, approximately 15.6 miles. This abandonment also will permit the road to remove the third rail and fastenings situated in its standard gage line between Chatfield and Denver, 20.35 miles, and in the Denver terminal yards, and will release about 71 units of narrow-gage equipment for use elsewhere or for scrap.

EAST BROAD TOP.—This road has applied to the Interstate Commerce Commission for authority to abandon the section of its Shade Gap branch between Shade Gap, Pa., and Neelyton, 4.1 miles.

ILLINOIS TERMINAL.—This road has applied to the Interstate Commerce Commission for authority to abandon two segments of line which are included in that requisitioned by the War Production Board. The segments are between Forsyth, Ill., and Mackinaw, 59.05 miles; and between a point near Decatur, Ill., to a connection with the Peoria & Eastern at a point near Danville, 75.03 miles. The application states that the operation of these lines has been uneconomical to the applicant by reason of the fact that the territory by them is also served by parallel and competing railroads and bus and truck lines.

NEW YORK CENTRAL.—This road and the Chicago, Kalamazoo & Saginaw have filed with the Interstate Commerce Commission a joint application seeking authority to abandon an 8.3-mile section of the latter's line between Richmond Junction, Mich., and Delton.

NORTHERN PACIFIC.—This road has been authorized by the Interstate Commerce Commission, Division 4, to abandon that part of a branch extending 6.2 mi. from a point near Carbonado, Wash., to the end of the line at Fairfax.

NORTHERN PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon a 4-mile section of its Fairview branch, extending from Keystone Junction, N. D., to the end of the track at Berndt.

TEXAS & PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon 5.5 miles of line between Longbridge, La., and Hamburg. The same application seeks authority to enter arrangements with the Louisiana & Arkansas for joint use of the latter's line between Mansura and Hamburg.

WESTERN MARYLAND.—This road has been authorized by the Interstate Commerce Commission, Division 4, to abandon its branch from Koontz Junction, Md., to Koontz, 0.94 mile, and part of a branch of its Georges Creek subdivision extending from milepost 3 to the end of the branch at Sonny, Md., 1.2 miles.

Railway Officers

FINANCIAL, LEGAL AND ACCOUNTING

Miss Magdalene Lauer, law assistant and chief clerk, and **Robert J. Wilde,** law assistant, in the Law department of the Baltimore & Ohio, have been promoted to assistant general attorneys, with headquarters at Baltimore, Md.

Jerome B. Jansen, general bookkeeper of the treasury department of the Denver & Rio Grande Western, has been promoted, effective November 1, to cashier, with headquarters as before at Denver, Colo., succeeding **Carl J. Hurd,** who will retire on that date after more than 47 years of service.

OPERATING

W. J. Stewart has been appointed trainmaster of the River division of the New York Central, with headquarters at Weehawken, N. J.

W. N. Elliott has been appointed assistant superintendent of the Mesabi division of the Great Northern, with headquarters at Kelly Lake, Minn., a newly created position.

W. F. Rentzel, traveling engineer of the Southern Pacific Lines in Texas and Louisiana at Ennis, Tex., has been promoted to superintendent of safety, with headquarters at Houston, Tex.

James E. Duffy, Jr., vice-president of the Port Huron & Detroit, has been appointed general manager, with headquarters as before at Port Huron, Mich., succeeding **George Y. Duffy,** who has entered military service.

J. M. Hanken, superintendent of car service of the Illinois Terminal, has been promoted to the newly created position of superintendent of transportation (in charge of operations), with headquarters as before at St. Louis, Mo.

Walter Allen, trainmaster of the Denver & Rio Grande Western at Denver, Colo., has been promoted to assistant superintendent, a newly created position, with headquarters at Burnham (Denver), Colo. The position of assistant superintendent at Pueblo, Colo., has been abolished.

E. L. Dunbar, trainmaster of the Southern at Huntingburg, Ind., has been transferred to Hattiesburg, Miss., and **R. C. Wilson,** trainmaster at Louisville, Ky., has been transferred to Huntingburg, succeeding Mr. Dunbar. **P. M. Wallis** has been appointed trainmaster at Louisville, replacing Mr. Wilson.

E. H. Hanson, chief clerk to the assistant general manager of the New York Central (Michigan Central) at Detroit, Mich., has been promoted to superintendent of freight transportation with the same headquarters, succeeding **E. H. O'Keefe,** who has been appointed assistant superintendent at Bay City, Mich. Mr. O'Keefe replaces **W. H. Leahy** who has been transferred to Jackson, Mich.

C. L. Pamplin, assistant trainmaster of the Norfolk & Western at Buena Vista, Va., has been transferred to Hagerstown, Va. **J. W. Dunman,** assistant yardmaster at Roanoke, Va., succeeds Mr. Pamplin as assistant trainmaster at Buena Vista. **Ashburne Oliver,** assistant road foreman of engines of the Norfolk division, has been appointed assistant trainmaster of the Norfolk division, with headquarters at Crewe, Va.

C. Franklin Lingenfelter, superintendent of the Toledo division of the Pennsylvania, who has been on a leave of absence because of illness since January, 1942, has been appointed assistant to the general manager of the Western region, a newly created position, with headquarters at Chicago. Mr. Lingenfelter was born at Altoona, Pa., on January 28, 1880. He attended business college at Altoona and

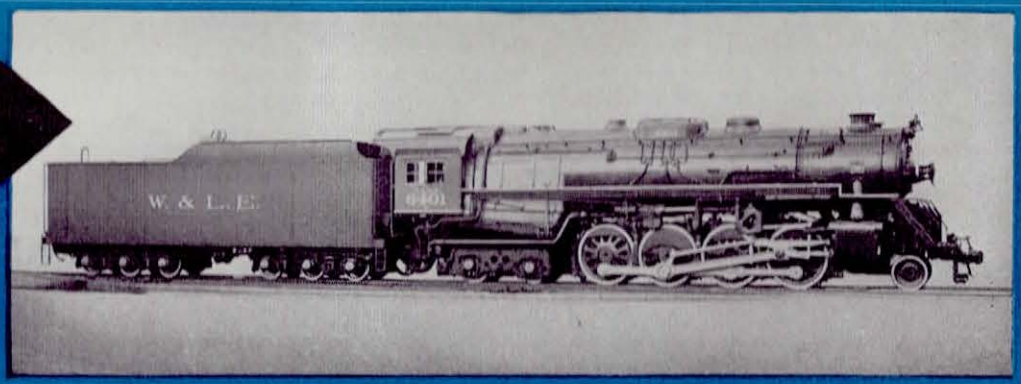
C. Franklin Lingenfelter

studied International Correspondence School and La Salle Extension University courses in electrical and mechanical engineering and the Pennsylvania Railroad Company's educational course. He entered railway service on February 19, 1898, as a laborer, subsequently serving as a clerk, locomotive fireman and locomotive engineman. On November 16, 1917, he was advanced to assistant road foreman of engines of the Pittsburgh division and on September 16, 1918, he was appointed assistant trainmaster at Chambersburg, Pa. Mr. Lingenfelter was appointed chief air brake inspector at Chambersburg on March 1, 1920, and on November 26, 1923, he was promoted to trainmaster of the Conemaugh division. In 1926 he was appointed freight trainmaster of the New York division and on May 16, 1928, he was promoted to assistant superintendent of the New York division. On January 1, 1929, he was advanced to superintendent of the Toledo division, with headquarters at Toledo, Ohio, and on October 16, 1931, he was transferred to the Columbus division. Mr. Lingenfelter returned to the Toledo division on April 1, 1935, where he remained

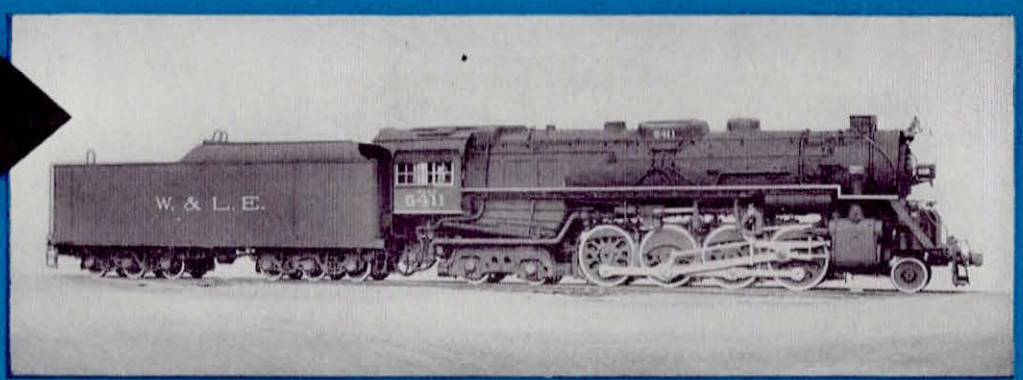
News Department continued on second left-hand page

TEN MORE

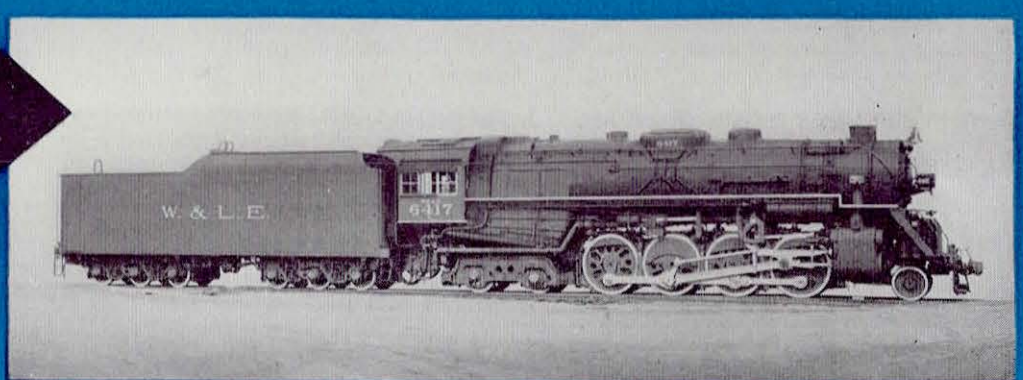
10 BUILT IN 1937



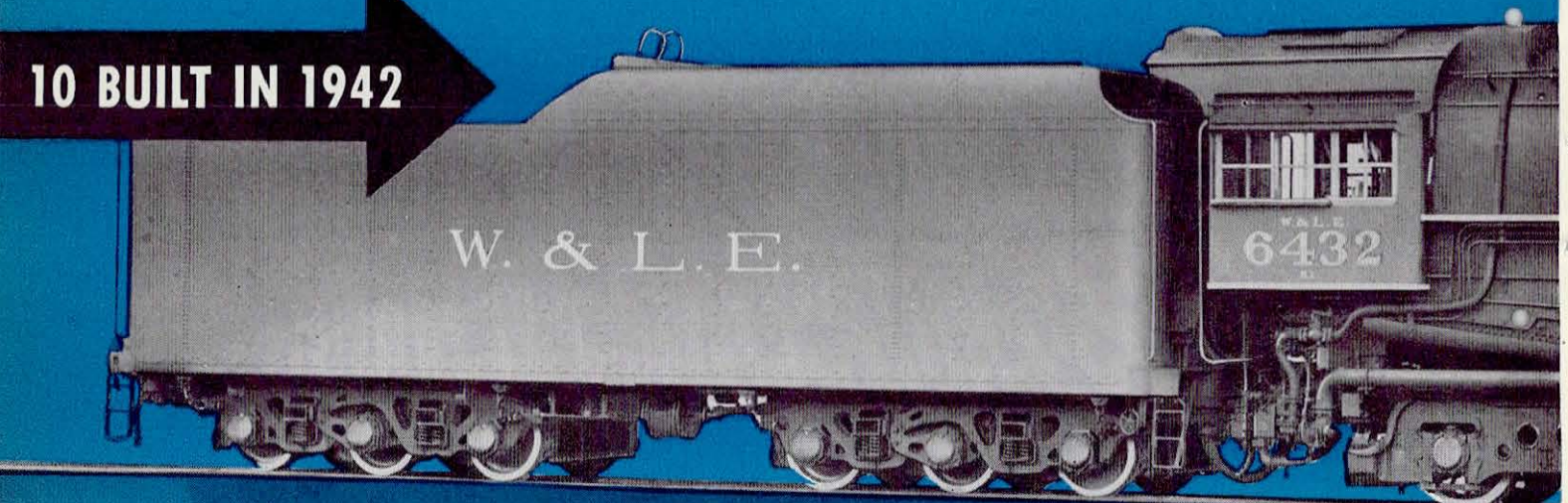
5 BUILT IN 1938



7 BUILT IN 1941



10 BUILT IN 1942



DELIVERED

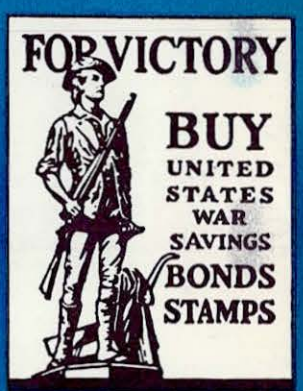
ARMY E NAVY

Another 100% War Job

Drawing iron ore south from Lake Erie and steel and coal north from the Pittsburgh district is one of the Nation's most important war-time hauling tasks. American Locomotive Company delivered ten locomotives to the Wheeling and Lake Erie Railway in 1937 for this service, five in 1938, seven in 1941.

This year, while also breaking production records and keeping ahead of commitments on tanks, gun carriages and other important ordnance, American Locomotive Company delivered ten more of these locomotives. How? The designs were already made, so were the tools and jigs.

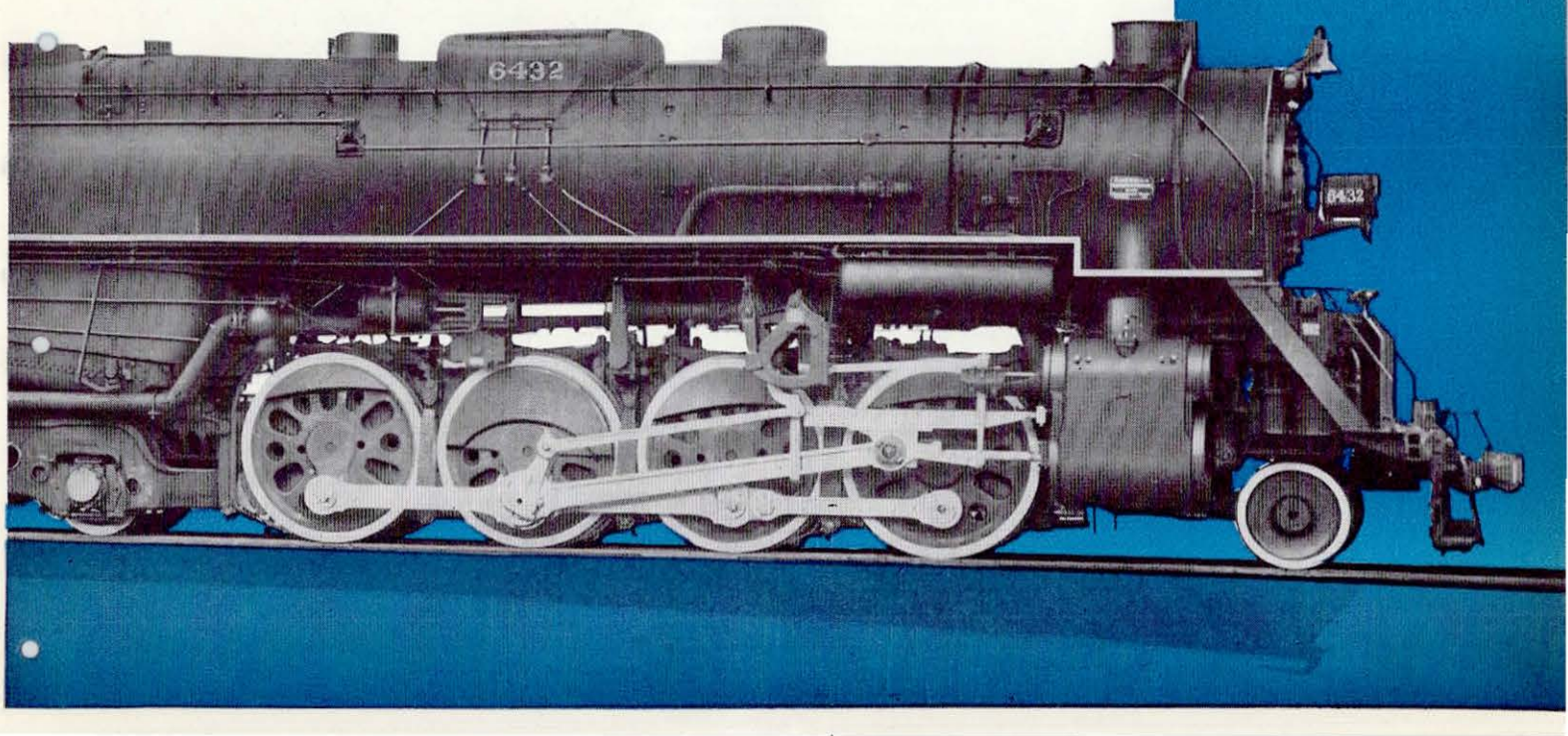
With this fleet of thirty-two modern, high-speed, freight locomotives strengthening their motive power, the Wheeling and Lake Erie Railway is enviably equipped to handle their enormous task.



AMERICAN LOCOMOTIVE

Manufacturers of Mobile Power

Steam, Diesel and Electric Locomotives, Marine Diesels, Tanks, Gun Carriages and other Ordnance



until he was granted a leave of absence in January, 1942.

TRAFFIC

Frederick C. Francis, manager of mail baggage and express traffic of the Chicago, Rock Island & Pacific, with headquarters at Chicago, will retire on November 1.

E. D. Curtis, live stock agent of the Baltimore & Ohio at Pittsburgh, Pa., has retired at his own request after more than fifty years of service. **A. L. Sherry** will succeed Mr. Curtis as live stock and perishable agent at Pittsburgh.

Edwin J. Falk, whose promotion to general freight and passenger agent of the Missouri Pacific, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of October 10, was born at St. Louis, Mo., on September 25, 1896, and entered railway service on March 1, 1911, as a stenographer in the freight traffic department of the Missouri Pacific, later serving successively as secretary, clerk, chief clerk and assistant general

Edwin J. Falk

freight agent at St. Louis. On March 15, 1933, he was appointed executive general agent at San Antonio, Tex., which position he held until his recent promotion, effective October 1.

G. F. Grafton, district passenger agent of the Southern, has been appointed division passenger agent, with headquarters as before at Atlanta, Ga. **F. R. Bottenfield,** city passenger and ticket agent, has been appointed division passenger agent, with headquarters as before at Memphis, Tenn. **G. R. Yarborough,** city passenger agent, has been appointed district passenger agent, with headquarters as before at Greensboro, N. C. **B. G. Cartwright,** city passenger agent, has been appointed district passenger agent, with headquarters as before at Chattanooga, Tenn. **R. T. Pinkerton,** traveling passenger agent, has been appointed district passenger agent, with headquarters as before at Charlotte, N. C. **J. L. Flautt,** traveling passenger agent, has been appointed district passenger agent at Birmingham, Ala. **O. K. Rodewald,** traveling passenger agent, has been appointed district passenger agent, with headquarters as before at Memphis, Tenn. **W. H. Callahan,** passenger traffic representative, has been appointed district passenger agent, with headquarters as before at Cincinnati, Ohio.

Paul P. Hastings, vice-president in charge of traffic of the Atchison, Topeka & Santa Fe, will retire on October 31. Mr.

Paul P. Hastings

Hastings was born in Farmington, Kan., on October 22, 1872, and attended the National Business College at Kansas City, Mo. He entered railway service on August 18, 1891, as a rate clerk in the freight auditor's office at Topeka, Kan., and in 1895 went to Arizona as a freight clerk for the Santa Fe, Prescott & Phoenix (now part of the Santa Fe system). He left the S. F. P. & P. in 1898 to become traffic manager of the United Verde Copper Company and later general freight and passenger agent for the United Verde & Pacific Railway, but returned to the S. F. P. & P. in 1903 as an auditor at Prescott, Ariz. In 1907 he was promoted to general freight and passenger agent and in 1912 when the S. F. P. & P. was consolidated with the Santa Fe, he was appointed assistant general freight agent at San Francisco, Cal. Soon after the railroads were taken under Federal control in 1918, he was called to Washington and placed in charge of the freight rate department under the assistant to the director of traffic. He remained in Washington after the war, assisting the railroad administration in clearing up unsettled freight matters. Mr. Hastings returned to the Santa Fe in 1922 as general freight agent at San Francisco and in 1936 was promoted to assistant freight traffic manager. He was advanced to freight traffic manager at Chicago in 1937, and on March 1, 1938, he was appointed vice-president in charge of traffic. Mr. Hastings is a member of the Traffic Advisory Committee of the Association of American Railroads.

J. N. Sanders, chief clerk of the general freight and passenger agent of the Missouri Pacific at Little Rock, Ark., has been promoted to division freight and passenger agent at Atchison, Kan., succeeding **J. J. Richey,** who has been assigned to other duties.

C. D. Stricker, district freight representative of the Minneapolis, St. Paul & Sault Ste. Marie at Detroit, Mich., has been promoted to acting general freight agent of the Canadian Pacific and the Soo Line at Detroit, succeeding **D. C. MacDonald,** who has been transferred to New York. Mr. MacDonald relieves **H. Stockdale,** who has been granted a leave of absence for military service.

PURCHASES AND STORES

A. B. Schliep, chief clerk of the Clyde (Ill.) store of the Chicago, Burlington & Quincy, has been promoted to commissary storekeeper, a newly created position, with headquarters at Lincoln, Neb.

ENGINEERING & SIGNALING

H. L. Woldridge, roadmaster of the St. Louis-San Francisco at Amory, Miss., has been promoted to division engineer of the Northern division, with headquarters at Ft. Scott, Kan., succeeding **F. N. Beighley,** who has been assigned to other duties.

J. R. Traylor, assistant engineer of the Missouri Pacific lines at Houston, Tex., has been appointed assistant valuation engineer, with the same headquarters, succeeding **H. T. Bradley,** whose appointment as valuation engineer, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of August 8.

Reginald T. Blewitt, whose promotion to bridge engineer of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of September 19, was born at Barrow-in-Furness, England, on August 11, 1894, and attended Barrow Technical School. He entered railway service on April 1, 1914, as an apprentice civil engineer with the Furness Railway Company (now the London, Midland & Scottish), and three years later he served as an apprentice engineer for five months on 4½ miles of subway extension. During the first World War, Mr. Blewitt served at Gallipoli, and in Egypt, France, Belgium and Italy, first with the Royal Naval Division Engineers, then as a second lieutenant in the Royal Engineers, 101st Field Company, 23rd Division. After the war he became permanent way engineer for the Barrow Hematite Steel Company, Ltd., a temporary position for the purpose of reorganizing its transportation system. Mr. Blewitt came to the United States in November, 1920, and in July, 1922, reentered railway service as a draftsman in the track department of the New York Central. On December 1, 1924, he went with the Nickel Plate as an assistant engineer and on February 1, 1927, he was appointed structural designer in the bridge department. Mr. Blewitt was promoted to designing engineer on January 1, 1941, the position he held until his recent promotion, effective September 10.

MECHANICAL

W. C. Sealy, superintendent of the motive power and car shops of the Canadian National at Montreal, Que., has been promoted to general superintendent of motive power and car equipment, with headquarters at Toronto, Ont., succeeding **E. R.**

News Department continued on next left-hand page

"FOUR-WAY" Brake Maintenance

Helps to Keep Trains Rolling

MOVEMENT of volume traffic today must be fast, reliable, and safe. Since we too are vitally concerned in keeping trains moving with urgently-needed equipment and supplies, the following reminders are offered as possible timely aids toward maintaining your air brakes in good condition — a requirement even more important now than ever before:

1 An out-of-order valve should not be taken apart while it is on a locomotive or car. Remove the complete device, or portion, and replace with one known to be in good condition, keeping exposed internal surfaces protected from dirt and injury. All inspection, cleaning, and oiling should be done at a shop bench.

2 If minor replacements are necessary, it is sound practice to use "genuine" repair parts, which insure a first class maintenance job without extra machining or fitting. Time and labor are thus minimized, reliable service prolonged.

3 When a valve needs major repairs, let us do this work for you. We have adequate and proper facilities — skilled mechanics, improved methods, accurate machines and tools. Exacting standards in materials and workmanship are thus maintained, correct performance of reconditioned apparatus guaranteed.

4 Consult our field men freely concerning your problems of air brake operation and maintenance. They are eager to help you get the best service from your existing equipment on hard-working cars and locomotives.

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Battley, whose promotion is noted elsewhere in these columns. **D. V. Gonder,** locomotive foreman at Turcot, Que., has been promoted to superintendent of the motive power and car shops, with headquarters at Montreal, succeeding Mr. Sealy.

Mr. Sealy entered railway service with the Canadian National as a messenger in the shops at Stratford, Ont., in May, 1903, and one year later became apprentice mechanic, terminating his apprenticeship in June, 1908. In November, 1909, he was appointed erecting shop foreman, becoming general foreman at Toronto in 1910. Subsequently he was appointed assistant

W. C. Sealy

master mechanic, and in November, 1915, became master mechanic. During 1917 Mr. Sealy's services were loaned to the General Car and Machinery Company, and he was employed at Montmagny, Que., as an instructor in the installation of a shell-manufacturing plant. He returned to Stratford in September, 1917, as foreman during a period when that shop was also engaged in the manufacture of shell for the British Army. In 1921, he became general foreman at Stratford, and in October, 1928, was appointed acting superintendent of the motive power shop there, becoming superintendent of the motive power shop in January, 1929. In February, 1939, Mr. Sealy was appointed superintendent of motive power and car shops at Montreal, which position he maintained until his recent promotion.

Edward H. Roy, night roundhouse foreman of the Norfolk Southern at Raleigh, N. C., has been appointed chief mechanical inspector, with headquarters at Norfolk, Va.

A. E. Rice, assistant superintendent of the Pueblo division of the Denver & Rio Grande Western, with headquarters at Pueblo, Colo., has been appointed assistant to the chief mechanical officer, with headquarters at Denver, Colo.

Edwin Roy Battley, general superintendent of motive power and car equipment of the Canadian National at Toronto, Ont., has been appointed chief of motive power and car equipment, with headquarters at Montreal, Que., succeeding **John Roberts,** who, as reported in the *Railway Age* of October 17, is serving as managing director of National Railways Munitions, Limited. Mr. Battley was born on October 21, 1886, at Stratford, Ont. He entered railway service in December, 1902, at Stratford, as a stenographer in charge of the office work for the locomotive foreman in the roundhouse of the Grand Trunk (now Canadian National), later becoming a "caller" for locomotive crews. After a short time, he was moved into the roundhouse to learn the details of grooming engines, after which he went to work in the motive power shops and progressed through all phases of apprenticeship to qualify as a machinist in 1908. His first supervisory position was that of inspector at Stratford and his next that of locomotive foreman at Fort Erie. In 1914, he became general foreman of the shops at Deering, Me., being appointed master mechanic at Montreal in 1917 and superintendent, with the same headquarters, in 1918. In 1927, when the union-management co-operative committees were being developed on the Canadian National, Mr. Battley was the machinist member of the committee of experts organized by the company's Bureau of Economics to study the technical features of the plan which has proven successful in actual operation. From Montreal Mr. Battley was transferred to the Toronto shops, and in July, 1930, was given a leave of absence to work with the National Railways of Mexico in conducting a study of machine shops and preparing recommendations for these establishments. Returning to Canada from Mexico, Mr. Battley was

Edwin Roy Battley

appointed superintendent of shop methods, with headquarters in Montreal, and in April, 1933, he was promoted to general superintendent at Toronto, which position he retained until his recent promotion to chief of motive power and car equipment for the System. In addition to his other duties, Mr. Battley will be in charge of the System shops in Canada and the United States. These shops maintain in proper running order a fleet of 2,500 locomotives, 90,000 freight cars and over 10,000 units of passenger and work equipment, and require a working force of approximately 23,000 men.

OBITUARY

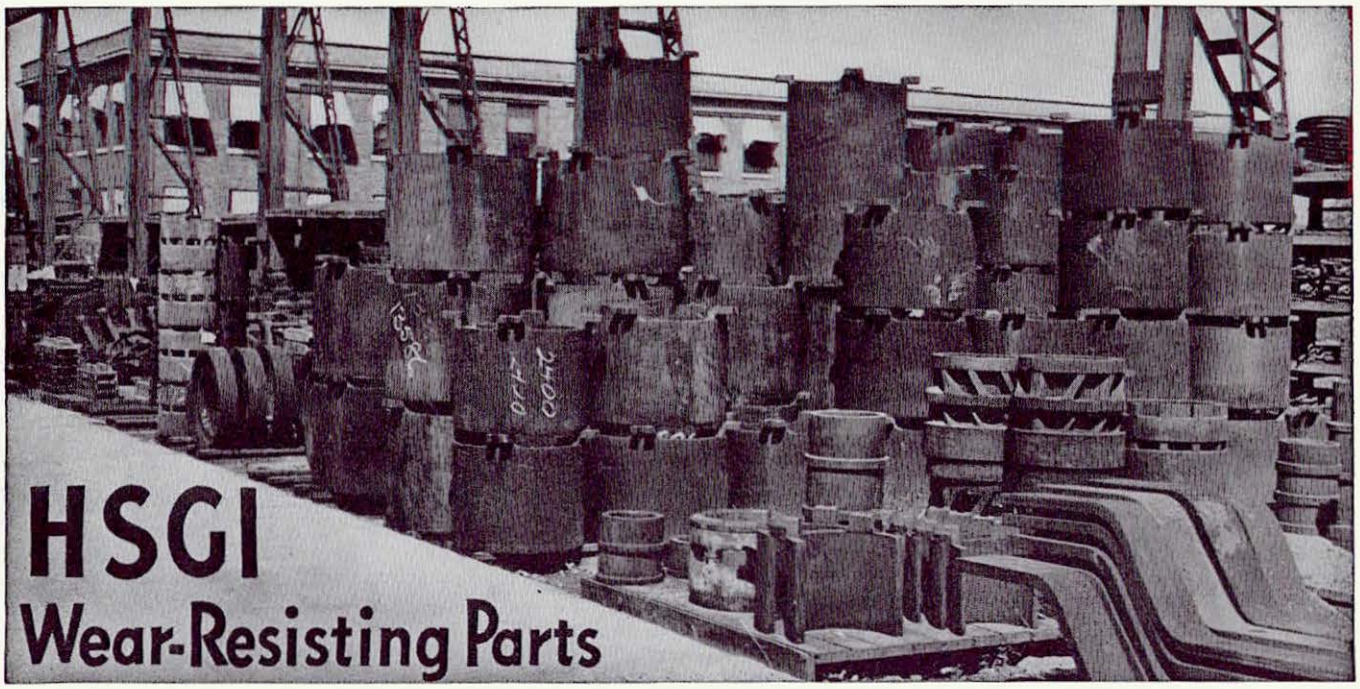
Alfred W. Wilkins, assistant to the district manager at Chicago, of the Car Service division of the Association of American Railroads and secretary of the Midwest Shippers' Advisory Board, died at the St. Francis Hospital, Evanston, Ill., on October 17.

John A. Rathburn, retired superintendent of car records of the Southern, died on October 9, at Atlanta, Ga.

Samuel J. Henry, who retired in 1937 as agent of the North Pacific Coast Freight Bureau, with headquarters at Seattle, Wash., died at his home in that city on October 17.

Vance H. Wilson, superintendent of the Los Angeles division of the Atchison, Topeka & Santa Fe, with headquarters at San Bernardino, Cal., who was recently granted a leave of absence, died at the Santa Fe hospital in Los Angeles, Cal., on October 16, after a long illness. Mr. Wilson was born at Cottonwood Falls, Kan., on November 27, 1886, and entered railway service in 1904 as a clerk of the Santa Fe at Albuquerque, N. M. He later served successively as switchman, agent and operator and engine foreman. In September, 1914, he was appointed yardmaster at Winslow, Ariz., and in October, 1918, he was appointed dispatcher at that point, being promoted to chief dispatcher in 1921 and trainmaster in 1922. In 1927 Mr. Wilson was transferred to San Bernardino and on May 20, 1930, he was promoted to acting superintendent of the Los Angeles division, with headquarters at San Bernardino. Two years later, he was appointed acting superintendent at Winslow and was promoted to superintendent in March, 1933. In November, 1935, he was appointed acting superintendent at San Bernardino and on February 1, 1937, he was promoted to superintendent of the Los Angeles division, where he remained until his death.

George S. Waid, who retired on March 1, 1930, as vice-president and general manager of the Texas lines of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., died at his home in Palo Alto, Cal., on September 3. Mr. Waid was born in Crawford county, Pa., on May 6, 1863, and entered railway service in 1881 as a telegraph operator of the Erie. Five years later he became a brakeman of the Southern Pacific, then advancing through the positions of conductor and yardmaster. In 1905 he became a trainmaster of the Galveston, Harrisburg & San Antonio (now part of the Southern Pacific Lines in Texas and Louisiana), at El Paso, Tex., two years later being promoted to division superintendent at the same point. Mr. Waid was promoted to assistant general manager of the G. H. & S. A., the Houston & Texas Central, the Houston East & West Texas, the Houston & Shreveport and the Texas & New Orleans (all now part of the Southern Pacific Lines in Texas and Louisiana), with headquarters at Houston, in 1912, a position he held until his further advancement to general manager in 1915. He served as vice-president and general manager of the Texas lines of the Southern Pacific from 1916 until his retirement in 1930.



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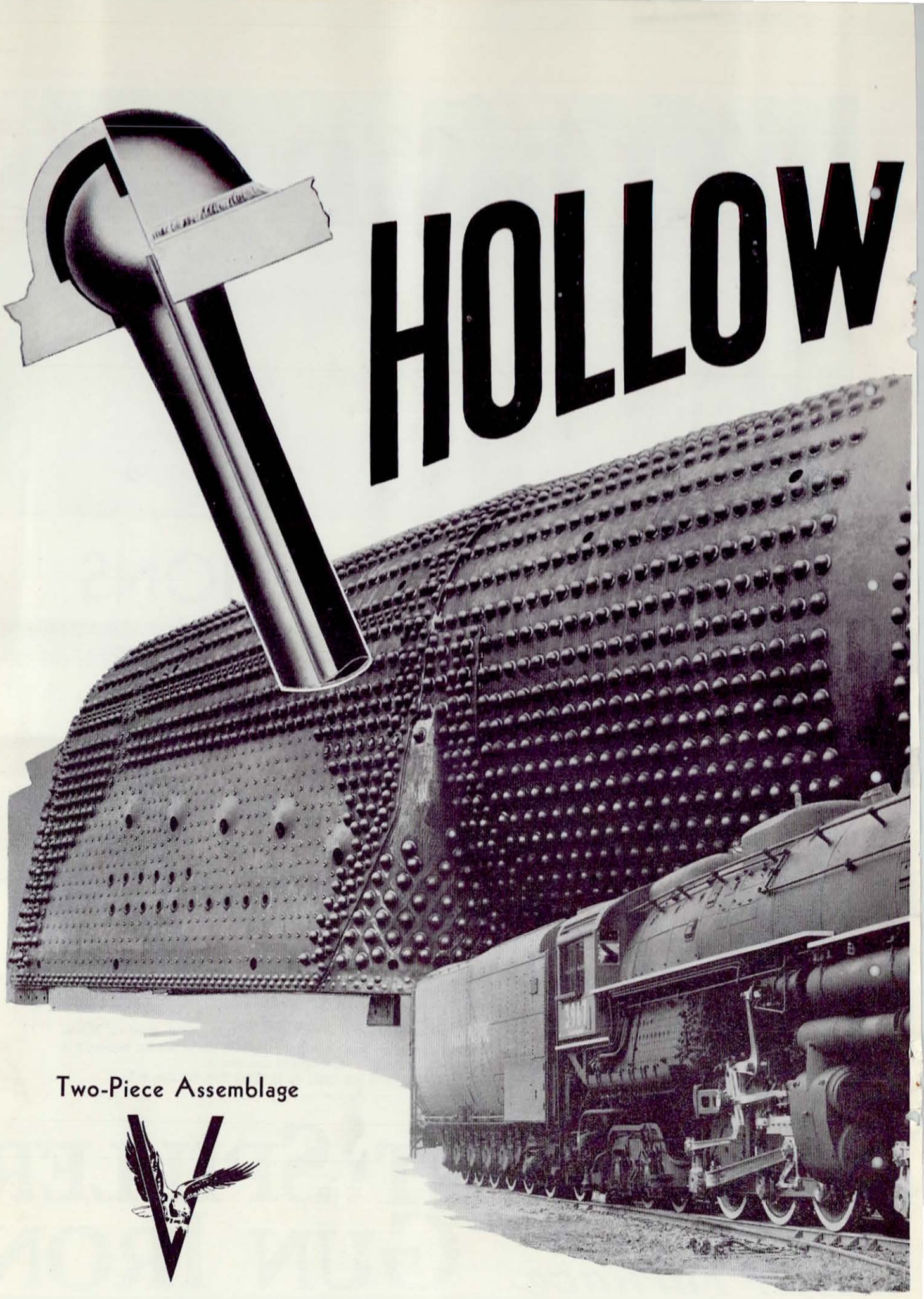
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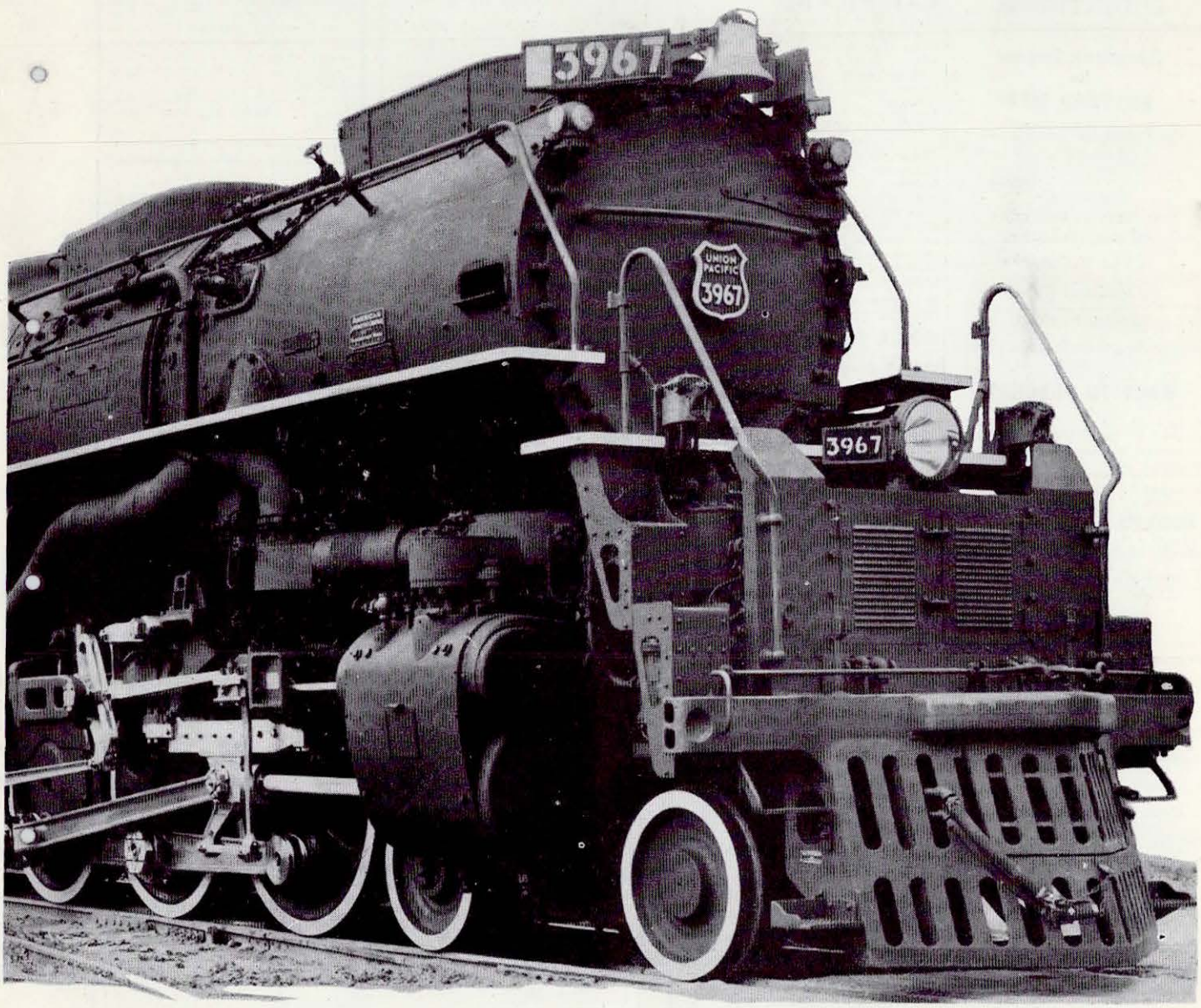

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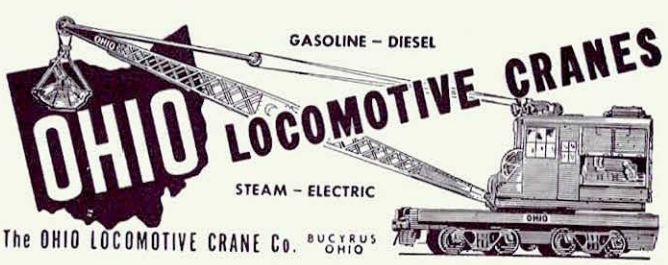

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Index to Advertisers

October 24, 1942

A

American Arch Company, Inc., Security Circulator Division 24, 25
American Creosoting Company, Inc. 16
American Locomotive Company 7, 28, 29
American Steel Foundries 15

B

Baldwin Locomotive Works, Inc. 4, 5
Bartlett Hayward Division of Koppers Co. 11
Bendix-Westinghouse Automotive Air Brake Co. 10

C

Classified Advertisements 34
Colonial Creosoting Company, Inc. 16

D

Dulien Steel Products, Inc. 35

E

Electro Metallurgical Company 13
Electro-Motive Division, General Motors Corporation .. Front Cover

F

Flannery Bolt Company 32, 33
Franklin Railway Supply Company, Inc. 26

G

General Electric Company 7
General Railway Signal Co. ..... Back Cover
Georgia Creosoting Company, Inc 16
Get Together Department 34
Gold Car Heating & Lighting Co. 35

H

Hunt Co., Robert W. 34
Hunt-Spiller Mfg. Corporation 31
Hyman-Michaels Company 34

I

Inland Steel Co. 3
International Railway Co. 35
Iron & Steel Products, Inc. 34

K

Kerite Insulated Wire & Cable Co., Inc., The 35
Koppers Coal 11
Koppers Company 11

L

Lima Locomotive Works, Inc. 23

N

National Malleable and Steel Castings Company 9
New York Air Brake Company, The 12

O

Ohio Locomotive Crane Co., The 35
Oxweld Railroad Service Company, The 6

P

Pittsburgh Spring & Steel Co. 35
Porter Company, Inc., H. K. 18

R

Railway Educational Bureau, The 34

S

Schaefer Equipment Company 2
SKF Industries, Inc. 8
Sonken-Galamba Corp. 34
Standard Railway Equipment Mfg. Co. 22
Superheater Co., The 27
Symington-Gould Corp., The 37

T

Tar and Chemical Division of Koppers Co. 11
Timber Engineering Company 14

U

Union Carbide and Carbon Corporation 6, 13
Union Switch & Signal Company 20

W

Waugh Laboratories, a division of Waugh Equipment Co. ... 17
Westinghouse Air Brake Co. 30
White Tar Division of Koppers Company 11
Wood Preserving Division of Koppers Company 11

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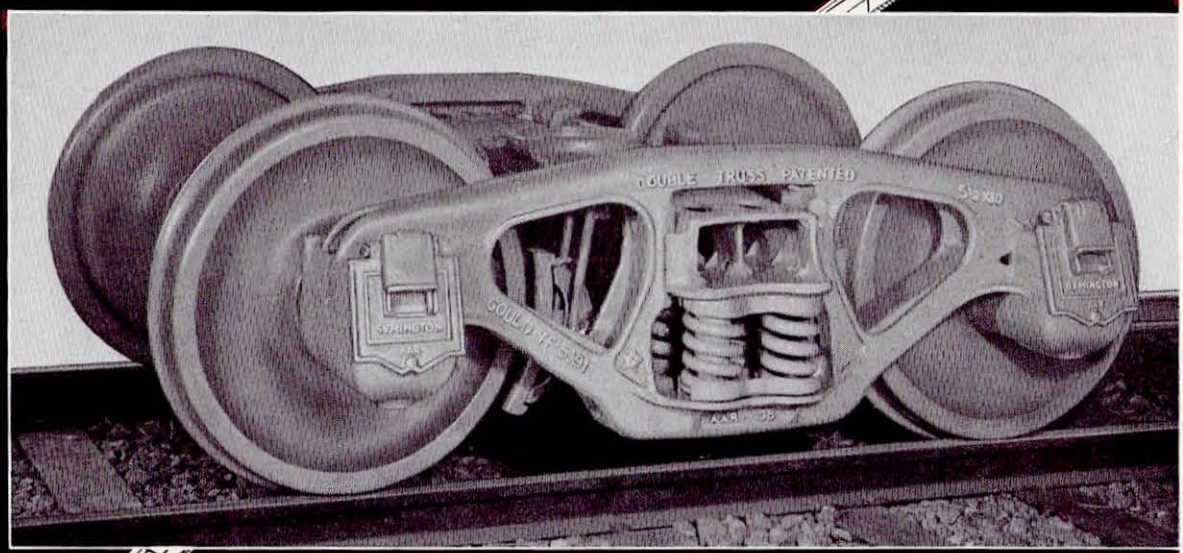

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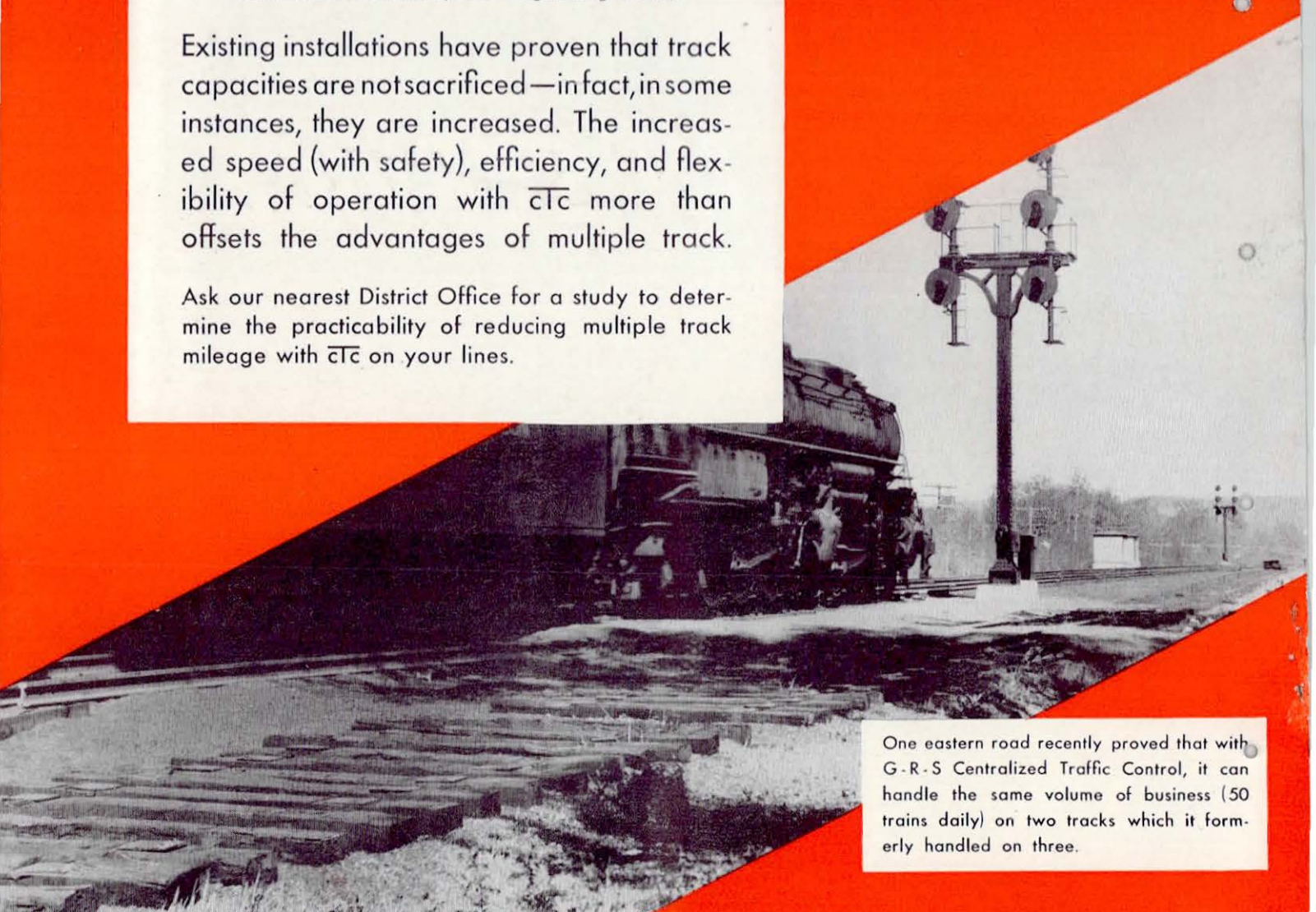

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